





MIND THE GAP:

Investing in Dementia as an Opportunity to Extend Healthspan

Michael T. Brown and Diane Ty with Christian Jung, PhD

About the Milken Institute

The Milken Institute is a nonprofit, nonpartisan think tank focused on accelerating measurable progress on the path to a meaningful life. With a focus on financial, physical, mental, and environmental health, we bring together the best ideas and innovative resourcing to develop blueprints for tackling some of our most critical global issues through the lens of what's pressing now and what's coming next.

About Milken Institute Health

Milken Institute Health bridges innovation gaps across the health and health-care continuum. We advance whole-person health throughout the lifespan by improving biomedical innovation, healthy aging, food systems, and public health.

About the Milken Institute Future of Aging

The Milken Institute Future of Aging advances healthy longevity and financial security for all through research, convenings, multisector partnerships, and the elevation of impactful policies and practices.

About the Alliance to Improve Dementia Care

The Milken Institute Alliance to Improve Dementia Care, a signature program of the Future of Aging, brings together a multisector coalition of leaders committed to advancing early detection, access to treatment and coordinated care, and health equity for people at risk for or living with dementia and their caregivers.

Table of Contents

1	Executive Summary				
3	Introduction				
5	The Gap Between Healthspan and Lifespan				
7	Entering a New Era of Cognitive Medicine				
10	Dementia's Ripple Effect: Impact on Individuals, Families, and Society				
12	Investing in a Dementia-Ready World with Urgency				
12	Invest in National Dementia Plans and Data Initiatives				
13	Build on Breakthroughs from Decades of Foundational Research				
14	Accelerate Clinical Trial Pipeline Development				
17	How Investors and Researchers Can Identify Opportunities amid the Challenges				
18	Global Prevention				
19	Detection and Diagnosis				
19	Targeted Treatments				
19	Care and Support				
21	A Collective Call for Collaborative Research and Investment				
22	Examples of Collaborative Global Initiatives for Dementia				
24	Where We Go from Here				
25	Appendix				
26	Endnotes				
31	Acknowledgments				
31	About the Authors				

Executive Summary

We are living in an era of remarkable longevity gains. In high-income countries, the average life expectancy has more than doubled over the past century, with many individuals expected to live well into their eighties. But this longevity boom masks a critical problem: the growing gap between lifespan and "healthspan"—the years lived in good health. This disconnect leaves many people, especially women, spending a decade or more in poor health at the end of life.

A key contributor to the healthspan-lifespan gap is dementia, which is an age-related chronic condition but not a part of normal aging. By 2050, more than 150 million people globally are projected to live with dementia unless treatments are discovered.

The Milken Institute launched the Alliance to Improve Dementia Care (the "Alliance") in 2020 and convenes a coalition of more than 135 organizations from the public, private, and nonprofit sectors to transform and improve the fragmented care systems that people at risk for or living with dementia and their caregivers must navigate.

This report advances the opportunities discussed in the 2021 Alliance report, <u>Roadmap for Investment in Dementia Care</u>, and highlights recent clinical innovations resulting from decades of historical research and funding. It makes the case for increasing investment in addressing dementia, given its increasing prevalence, devastating impact on individuals and their families, and increasing economic challenges.

The recent Food and Drug Administration approval of blood tests for Alzheimer's detection, a deeper understanding of modifiable risk factors, and the arrival of disease-modifying therapies offer new hope and raise the stakes for continued progress. With nearly 140 drugs currently in the Alzheimer's pipeline, we may be on the cusp of more waves of therapies targeting a range of biological mechanisms of aging that underlie or contribute to dementia. However, if research and investment in addressing dementia do not increase or, worse yet, are not maintained at current levels, progress will not continue, and the field is at risk of setbacks.

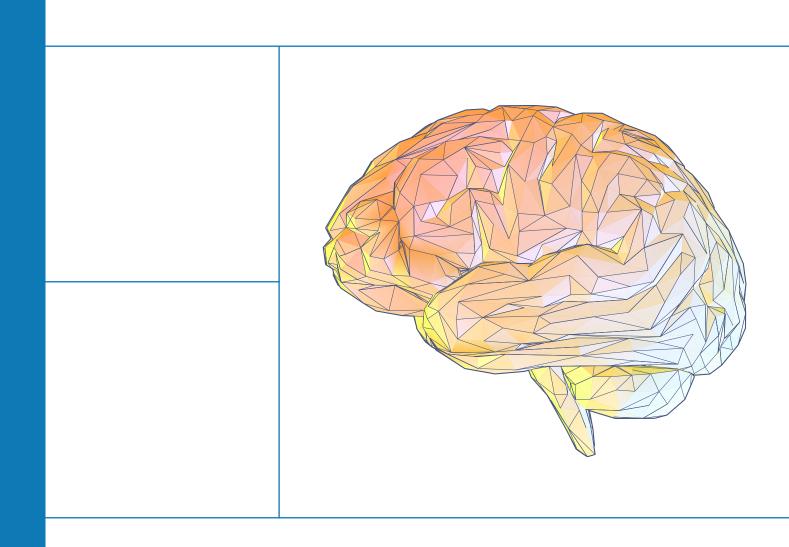
Investing urgently in a dementia-ready world requires a growing global recognition of the need for action. In May 2025, the 78th World Health Assembly extended the World Health Organization Global Dementia Initiative through 2031, with a focus on improving care, accelerating diagnosis, and promoting innovation. But progress is uneven and too slow. Without sustained investment, especially in public funding, the gains we have made will stall.

In this report, we identify four key domains for continued strategic funding and research:

- Global prevention by investing in initiatives that address the global awareness of known modifiable risk factors to lower the projected increasing cost and prevalence trends.
- **Detection and diagnosis** by investing in tools and programs for early detection, integrated into clinical pathways to support timely and accurate diagnosis.
- Targeted treatments by investing in understanding the molecular and genetic basis of dementia to advance the biomarker and therapeutic developments for more effective treatments.
- Care and support by investing in equitable and accessible care and social support programs for people living with dementia and their caregivers to improve their quality of life.

To address dementia at scale, we must embrace bold, coordinated action. Governments, companies, philanthropic funders, private capital, and research institutions must collaborate to close gaps in research funding compared to other major diseases, such as cancer. This includes treating dementia not as an inevitable aspect of aging but as a solvable set of conditions requiring targeted intervention.

If we are serious about longevity, we must be serious about addressing dementia, because it is a crucial limiting factor of healthspan. This report invites readers, especially longevity investors and funders of aging research, to place dementia at the core of their strategy. Together, we can shape the 21st century not only as an age of extended lifespans, but also as the Century of Thriving.



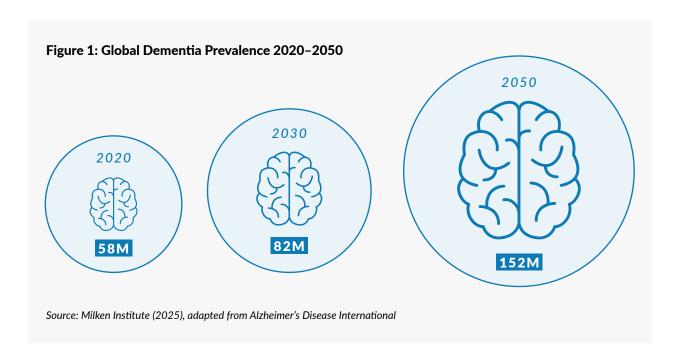
Introduction

Over the past century, the number of years one can expect to live has doubled. In 1900, a newborn's global average life expectancy was 32 years; today it is 73 years. The Oceanic region, including Hong Kong, Japan, and South Korea, leads at 84.3 to 86.4 years. Life expectancy averages 81.3 years in the United Kingdom and 79.3 years in the United States. It averages 81.4 years in high-income countries and 64.9 years in low-income countries. The gap between the longest life expectancy in Monaco (86.4 years) and the shortest life expectancy in Nigeria (54.5 years) is 31.9 years.¹

More people than ever are celebrating their 80th, 90th, and 100th birthdays. The number of centenarians is estimated to increase by greater than 500 percent in the next 25 years, from nearly 600,000 people today to 3.7 million people by 2050.² However, there is a gap between "healthspan," or the years lived in good health, and lifespan, total years lived. Growing evidence finds that people spend a decade or more in poor health, the "marginal decade" toward the end of life, with women experiencing a longer healthspan-lifespan gap than men.

In this report, we advance the opportunities discussed in our 2021 report, <u>Roadmap for Investment in Dementia Care</u>, as we discuss dementia's role as a key contributor to the healthspan-lifespan gap. We highlight recent clinical advancements resulting from decades of research and funding and provide considerations for researchers and investors to continue progress toward solving the challenges associated with dementia.

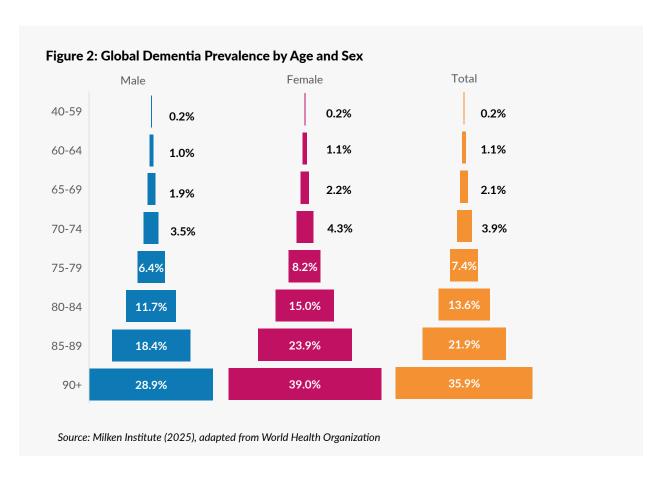
Alzheimer's Disease International (ADI) projects a near tripling of global dementia cases over the next 25 years, from 58 million people today to 152 million people by 2050, driven by the aging population (see Figure 1).³



The condition of dementia is complex and nuanced. It is a syndrome caused by several underlying neurodegenerative diseases, which over time progressively destroy neurons, leading to deterioration in cognitive function and ultimately loss of the ability to complete basic life-sustaining activities.⁴

However, modern scientific breakthroughs are changing the conversation about cognitive impairment and dementia. A new generation of monoclonal antibody therapies, early detection capabilities, and growing awareness of risk factors are galvanizing optimism that this crisis is solvable. If we truly care about human longevity, then we must prioritize research that addresses major obstacles that inhibit the quality of that longevity.

Over the next 25 years, the world will need to transform into an age-friendly society because nearly one in five people will be aged 65 and older. The risk and prevalence of dementia increases with age, with greater than 70 percent of cases occurring in individuals over 80. As shown in Figure 2, the condition disproportionately affects women more than men.⁵



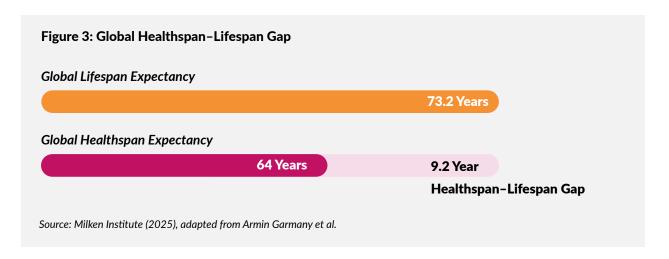
To support this transformation, businesses, health systems, researchers, investors, and government leaders should take a systems-wide approach to investing in longevity, making cognitive health and solving the problem of dementia top priorities.

The Gap Between Healthspan and Lifespan

Advancements in medicine, sanitation, and overall public health have contributed to a global extension of life expectancy over the past seven decades. From 1950 to 2020, the global average life expectancy rose 55 percent from 47 to 73 years.⁶

Lifespan expectancy is a statistical estimate of the average number of years a person is expected to live from birth. Lifespan is defined as the total number of years lived, and maximum lifespan is the greatest age reached by any human to date, which is estimated to be 120 to 125 years. This concept differs from that of healthspan, which refers to the years lived free from disease and disability, also considered as Health-Adjusted Life Expectancy.

A global lifespan expectancy of 73.2 years and a global healthspan expectancy of 64.0 years results in a 9.2-year gap—the healthspan-lifespan gap (see Figure 3).8 The US leads with the largest healthspan gap in the world at 12.4 years.9 For women, the gap is 2.4 years longer than men. This gap reflects a significant reduction in quality of life for nearly the entire last decade of life.



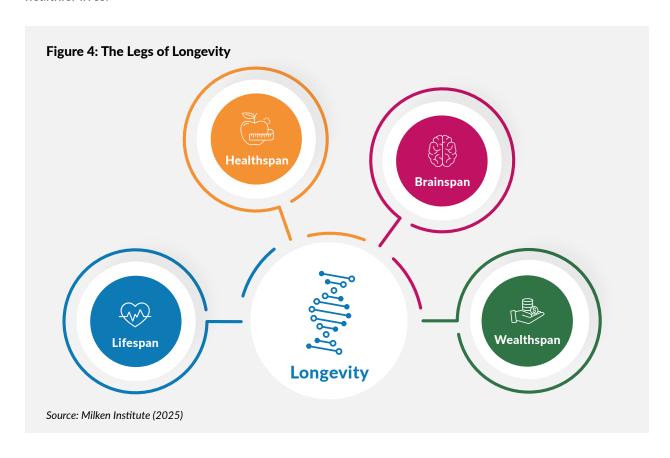
A global average healthspan expectancy of 64 means that more people will experience this healthspan-lifespan gap than ever before. In 2024, an estimated 830 million people were age 65 and older, or about 10 percent of the global population. By 2050, that number is projected to be 1.6 billion, or 17 percent of the total population.¹⁰

The World Health Organization has declared the 2021–2030 decade as the "decade of healthy aging," emphasizing the importance of promoting well-being and quality of life for older adults.

Advances in modern medicine have significantly increased average lifespan. However, extending lifespan without improving healthspan will prolong the time that individuals spend in poor health. Now, researchers, medical professionals, governments, and public health institutions should focus on ensuring those additional years are lived in good health.

For ideas about how to live as healthy as possible for as long as possible, we look to the world of longevity research and investing. Investment in the "Longevity Sector" has developed gradually over the past 10 years, from \$500 million in 2013 to \$8.48 billion in 2024. Longevity research encompasses therapeutics and health-care models that focus on physical, emotional, social, financial, and cognitive health. Current research indicates that a key contributor to the healthspan-lifespan gap is based in neurology; therefore, a focus on "brainspan" is critical. Current research indicates that a key contributor to the healthspan-lifespan gap is based in neurology; therefore, a focus on "brainspan" is critical.

While speaking at the Milken Institute Global Conference in May 2025, Richard Isaacson, MD, covered three important components of longevity, giving a nod to brainspan (see Figure 4). The Milken Institute Future of Aging includes "wealthspan"—years of financial stability—as a fourth leg in supporting longer healthier lives.



There are multiple legs of the longevity stool: lifespan, how long you live; healthspan, the quality of life you have based on your conditions; and brainspan, the quality of life you have based on your cognitive health."

-**Richard Isaacson,** MD, Director, Atria Precision Prevention Program, at the Milken Institute Global Conference

Entering a New Era of Cognitive Medicine

Aging itself is the primary risk factor for the development of Alzheimer's disease and related dementias (ADRD). Similar to physical strength, we can expect to lose some cognitive processing speed over time; however, pathological cognitive decline that results in dementia is not a part of normal aging.¹³ If cognitive decline is detected and attended to early, its effects on individuals, their families, and society may be mitigated.

The Diagnostic and Statistical Manual of Mental Disorders (DSM) categorizes cognition, the process of thinking, into six domains: learning and memory, executive function, complex attention, perceptual-motor coordination, language, and social cognition.¹⁴

When cognitive function declines to the extent that it begins to affect our daily lives, disease progression may be under way and detectable through cognitive testing or biomarkers, which are measures of biological change. Such changes in Alzheimer's disease are neuropathological, including the accumulation of amyloid-beta (A β) plaques and tau neurofibrillary tangles; synaptic and neuronal loss; and transmitter deficiencies and neuroinflammation.¹⁵ Accumulated amyloid deposits can be detected in cerebrospinal fluid (CSF) or plasma up to 20 years and Tau tangles detectable up to 15 years prior to symptom onset.¹⁶ Figure 5 outlines new staging guidance from the Alzheimer's Association, including early asymptomatic stages with genetic risk factors (stage 0) or asymptomatic with detectable biomarkers for Alzheimer's disease (stage 1).¹⁷

Health-care providers consider activities of daily living (ADLs), the tasks a person does every day, to determine the level of care support needed. These tasks range from basic, such as bathing and dressing, to complex (called instrumental ADLs [iADLs]), such as paying bills, driving, and cooking. By monitoring ADLs, clinicians and caregivers can gauge the level of a disease's impact on a person's life.¹⁸

When older adults and their families first report symptoms of "memory loss," clinicians face the initial challenge of determining whether the cognitive changes are clinically significant. In some cases, cognitive impairment can be reversed if caused by, for example, polypharmacy interactions, vitamin B12 deficiency, sleep apnea, or hearing loss. Cognitive impairment that has persisted for several months and only slightly affects iADLs may be diagnosed as mild cognitive impairment (MCI). Dementia is typically diagnosed when cognitive impairment progresses to a level that significantly compromises functional abilities, and corresponding to the level of severity, can be classified as mild, moderate, or severe, each requiring different levels of care and support.

Dementia is not a disease; it is a syndrome (a collection of symptoms) caused by a number of diseases that progressively destroy neurons and surrounding brain cells over time, leading to deterioration in cognitive and physical function.¹⁹

Figure 5: 2024 Criteria for Diagnosing and Staging Alzheimer's Disease

	Staging	Biomarker Changes	Cognitive Changes	Functional Changes	
0	Asymptomatic w/ Genetic Risk Factors	 Biomarkers in normal range Genetic risks detected (APP/PSEN1/2/APOE) 	Normal cognitive		
1	Asymptomatic w/ Biomarker Evidence Only	Elevated biomarkers detected (amyloid beta/ ptau217)	performance	Normal functional performance	
2	Subjective Cognitive Impairment/ Decline	May have elevated biomarkers	 Subjective cognitive impairment/decline reported Subtle detectable change from baseline, but in normal range 		
3	Mild Cognitive Impairment	Elevated biomarkers detected	Cognitive impairment detected	 May have impact on instrumental activities of daily living (ADLs) No impact on basic ADLs 	
4	Mild Dementia		Progressive cognitive decline	 Impairment of instrumental ADLs Maintained independence with basic ADLs 	
5	Moderate Dementia			 Moderate functional impairment Requires assistance with basic ADLs 	
6	Severe Dementia			 Severe functional impairment Complete dependence for basic ADLs 	

Source: Milken Institute (2025), adapted from Jack et al. (2024)

The most common form of dementia is Alzheimer's disease, accounting for 60 to 80 percent of cases and mostly impacting the memory domain. The remaining major forms of underlying disease are vascular dementia, dementia with Lewy bodies, and <u>frontotemporal dementia (FTD)</u>, which may contribute to 20 percent, 5 to 15 percent, and 1 to 5 percent of cases, respectively.²⁰ There are age- and non-age-related neurodegenerative diseases that can also affect cognition and cause dementia symptoms, including Parkinson's disease, amyotrophic lateral sclerosis (ALS), motor neuron disease, Huntington's disease, and rarer disorders such as prion diseases.

As neurology moves toward an era of precision medicine, research has found that clinical diagnosis of Alzheimer's disease is rarely just based on amyloid or tau pathology. Various forms of vascular disease, TDP-43 (associated with FTD and ALS), and alpha-synuclein proteinopathy (found in Lewy bodies) are common co-pathologies.²¹ Research to understand the interplay among these pathological processes is needed so that biomarker tracking can accurately project prognosis before symptoms of cognitive impairment and dementia occur.

Researchers, investors, clinicians, and health systems should strive to understand all forms of dementia and early indicators of its underlying diseases and to drive systematic progress toward effective interventions to mitigate the impact of these diseases on ADLs—to ultimately promote independence and close the healthspan–lifespan gap.

Dementia's Ripple Effect: Impact on Individuals, Families, and Society

When the functional disabilities experienced with dementia cause a loss of independence, families must step up to manage the care and support, which is largely unpaid and not formally recognized. The long duration and slow progression of the disease can cause poor quality of life for both individuals and caregivers. The economic impact is distributed between direct costs for medical care and indirect costs related to non-compensated caregiver support and lost productivity of both the person living with dementia and their caregivers.

Communities at a disproportionate risk for ADRD, including rural populations, persons with low education status, non-Hispanic Blacks, and Hispanics, have a higher risk of missed or delayed diagnosis of dementia.²² Preventing missed or late diagnosis is crucial because time delay can exacerbate disability, reduce treatment effectiveness, impede access to timely care, and increase health-care costs.²³

To address these growing challenges, researchers, investors, health systems, and government leaders must embrace a systems-wide approach so that advancements in longevity can be implemented and equitably accessible across low-, middle-, and high-income countries, with particular attention on communities facing disproportionate risks. Figure 6 demonstrates the far-reaching impact dementia has on many stakeholders, making it an imperative to address.²⁴

Figure 6: Putting the Pieces Together to Address Dementia's Unsustainable Impact on Many Stakeholders

Individuals

92% of suspected mild cognitive impairment cases are undiagnosed in US.

50% of suspected dementia cases are undiagnosed.

Symptoms vary from person to person, causing a range of behaviors such as apathy toward life and others, withdrawal from work and community, and emotional distress and agitation.

Workplace and Communities

Nearly one-fifth of the workforce is 65 years and older.

Cognitive impairment in the workplace presents new challenges for employers, who need to have policies and education in place to reduce fear and stigma among employees.

Young-onset dementia for people diagnosed before age 65 represents about 7% of global cases and has a prevalence of approximately 119 per 100,000 people aged 30–64.

Family and Caregivers

80% of people with Alzheimer's disease and related dementias receive care at home from family or friends.

Nearly 1 in 3 family caregivers will provide care for 4 years or more.

Out-of-pocket annual expenses for US dementia caregivers is \$9,000.

An estimated 50% of economic costs associated with dementia are attributed to loss of productivity by informal family caregivers.

Greater than 50% of caregivers experience clinical depression and physical health impacts—up to 4 times higher than non-caregivers.



Nearly 60% of people living with dementia currently live in low- and middle-income countries; this is expected to rise to 71% by 2050.

The global societal costs of dementia are expected to reach \$2.8 trillion by 2030.

Health Systems

The average annual cost per person with dementia in Europe is approximately €32,405 (\$37,017).

In the UK, dementia-related medical expenses totaled £42.9 billion (\$58.2 billion) in 2024, equating to 23% of total National Health Service spend.

In the US, dementia-related medical expenses totaled \$360 billion in 2024.

In the US, the average per-person Medicare spending for older adults living with dementia is 2.8 times higher than average beneficiaries

Source: Milken Institute (2025), using multiple data sources

Investing in a Dementia-Ready World with Urgency

Invest in National Dementia Plans and Data Initiatives

ADI projects dementia will move from the seventh to the third leading cause of death by 2040.²⁵ Recognizing the urgency of the situation, the World Health Organization (WHO) has designated dementia as a top public health priority.

In May 2017, the World Health Assembly endorsed the Global Action Plan on the public health response to dementia for 2017 to 2025. Reauthorized in May 2025, the 78th World Health Assembly agreed to extend the initiative for six more years until 2031. This initiative seeks to enhance the quality of life for individuals with dementia and their families, as well as mitigate the broader societal impact of the disease on communities and countries worldwide. Paola Barbarino, CEO of ADI, recognized the urgency of the moment by saying, "We must now seize this opportunity, bringing together the dementia community to ensure that governments deliver against this renewed commitment, by creating robust and funded National Dementia Plans." 26

This bold global initiative is desperately needed to foster a dementia-ready world; however, its adoption has not kept pace with program goals. As of May 2025, 45 WHO Member States have implemented National Dementia Plans, well short of the target of 146.²⁷ National Dementia Plans recognize the value of older people and those with dementia in society. They include a vision for the future, a strategic framework, and actions to be jointly taken by government and nongovernment partners. The main components of a Dementia Plan serve to raise public awareness and create mutual understanding about dementia, address population needs, reduce the burden of dementia, and protect the human rights of people living with dementia, their caregivers, and families.²⁸

The Global Dementia Observatory was developed to collect country-specific information across policies, services, and research. However, only 29 countries could report on dementia diagnostic rates.²⁹ To properly quantify the prevalence of and resources needed by people living with dementia, health systems and public health programs should invest in better tracking systems. The <u>Dementia Data Hub</u> is one such example seeking to accurately map and track known cases of dementia for US Medicare beneficiaries.

Within the US, since 2007, 49 states have published State Alzheimer's Disease Plans.³⁰ Common recommendations include increasing education and awareness, promoting early detection and diagnosis, expanding access to home- and community-based services, and addressing workforce shortages.

The Multisector Plan for Aging (MPA) is a 10-year blueprint that seeks to implement age-friendly policies and infrastructure at the community level. The Older Americans Act required all states to establish a State Plan on Aging. However, MPAs are designed to create a coordinated system to promote healthy aging, independent living, and social engagement, while also addressing issues related to health care, housing, transportation, and other social determinants of health. As of June 2025, 38 states have Authorized MPAs, are currently implementing/refreshing MPAs, or are interested in developing an MPA.³¹

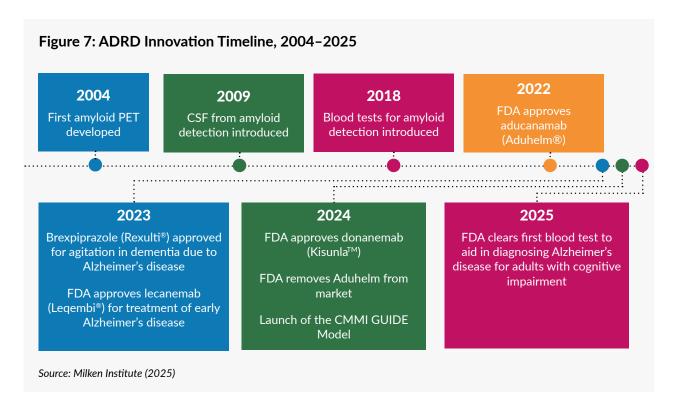
Build on Breakthroughs from Decades of Foundational Research

The pace of implementation for nations to adopt the latest evidence and innovation in treatments, risk reduction, care, and infrastructure support must rapidly increase if we want to bend the curve of current global projections on prevalence and economic impact.

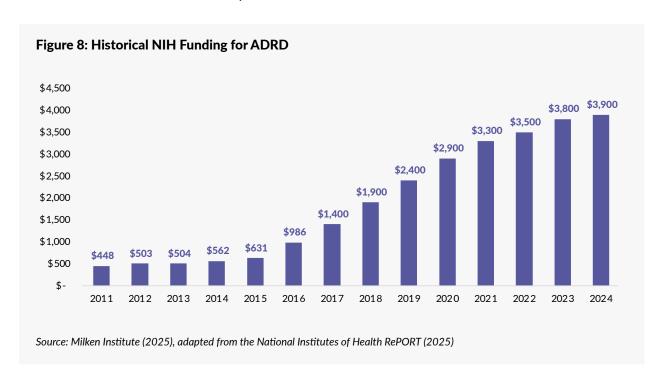
The ADRD field has experienced clinical success during the past few years because of the foundational research and investment that occurred during the past 20 years (shown in Figure 7). The biomarker field for Alzheimer's disease advanced tremendously with the development of the first radiotracer to bind to amyloid plaques in 2004, which enabled imaging of brain amyloid through positron emission tomography (PET), and in 2009 CSF testing for detecting biomarkers was routinely embedded in trials. By 2018, blood tests demonstrating good performance in identifying individuals with amyloid pathology were routinely included in Alzheimer's disease clinical trials.³²

These advancements in biomarker development and validation have led to recent breakthroughs in Alzheimer's disease drug development, with the US Food and Drug Administration (FDA) approving three anti-amyloid monoclonal antibodies—aducanamab (Aduhelm®) (2021), lecanemab (Leqembi®) (2023), and donanemab (Kisunla™) (2024)—and brexpiprazole (Rexulti®) for treatment of agitation in dementia associated with AD in 2023. These recent successes have influenced the development of other ADRD therapeutics by demonstrating an ability to slow disease progression, establishing biomarkers to diagnose and track therapeutic response, and providing regulatory standards for developing and approving disease-modifying therapies.

However, this first wave of anti-amyloid monoclonal antibodies has faced hurdles and pushback on risk profile and cost, while their clinical impact for patients remains modest. After scrutiny, Aduhelm was officially removed from the market in January 2024, and not all regulators have been quick to approve Leqembi and Kisunla. For recent regulatory activity, refer to the Appendix.



Many of the successful breakthroughs in ADRD research can be traced to the National Alzheimer's Project Act (NAPA), which was enacted in 2011 and reauthorized in 2024. The National Institutes of Health (NIH) has steadily increased funding for these diseases (see Figure 8), reaching \$3.9 billion in 2024, a more than seven-fold increase since NAPA's inception.³³



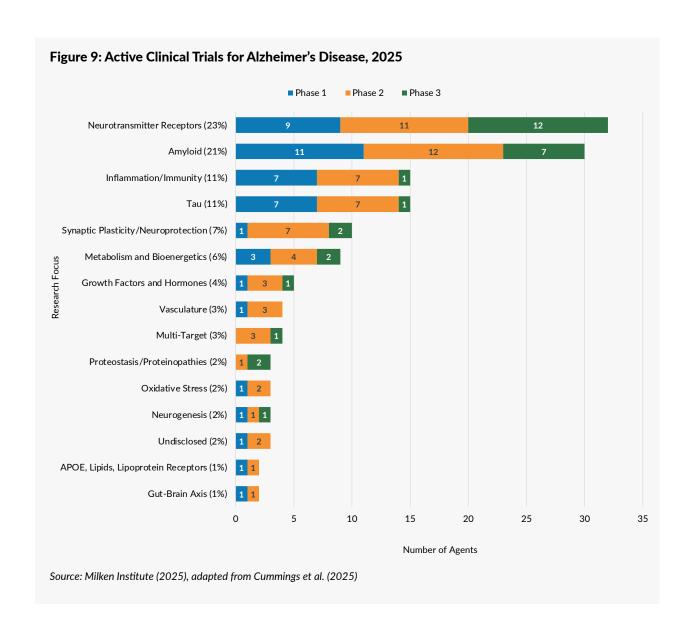
The next wave of Alzheimer's disease drugs currently in clinical trials targets a diverse set of mechanisms that cause cognitive impairment and may identify promising new treatment options. **However, moving forward, if public funding allocations are not maintained, we may not experience the same rate of innovation.**

Accelerate Clinical Trial Pipeline Development

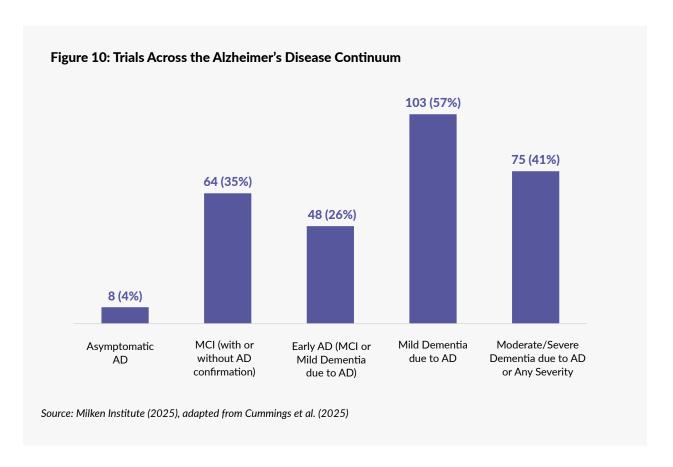
As of January 1, 2025, the Alzheimer's disease drug development pipeline consisted of 182 clinical trials assessing 138 drugs. This pipeline is a reflection of the joint efforts from investors, such as the Alzheimer's Drug Discovery Foundation, the SV Dementia Discovery Fund, Gates Ventures, and others, working closely with government entities, pharmaceutical companies, advocacy organizations, philanthropists, and charities, to identify and translate frontier scientific insights through the creation and funding of early-stage dementia-focused biotech companies. Similar drug development pipeline categorization efforts for FTD, dementia with Lewy bodies, and vascular dementias would be valuable contributions to the field.

The deep and diverse expertise captured through cross-sector alliances provides the foundation for enabling faster and more impactful prioritization and results in the treatment pipeline, with thought leaders representing all aspects of the dementia ecosystem contributing core insights. The combination of expertise and deep sector knowledge is at the core of what has enriched, and continues to enrich, the treatment pipeline to deliver global and meaningful impact to people living with dementia and their care partners.

The next generation of these treatments is moving beyond the previous theories of amyloid as the key target, known as the "Amyloid Hypothesis." The majority (79 percent) of clinical trials for Alzheimer's disease are targeting non-amyloid mechanisms, with particular growth in treatments targeting neurotransmitter receptors, inflammation, and tau proteinopathy (see Figure 9).³⁴ Trials are segmented into descriptive categories for the Common Alzheimer's Disease Research Ontology.



The current trial pipeline represents all stages of the Alzheimer's disease continuum (see Figure 10).³⁵ Trials often target multiple stages within a single trial, meaning that reporting across stages is not mutually exclusive.

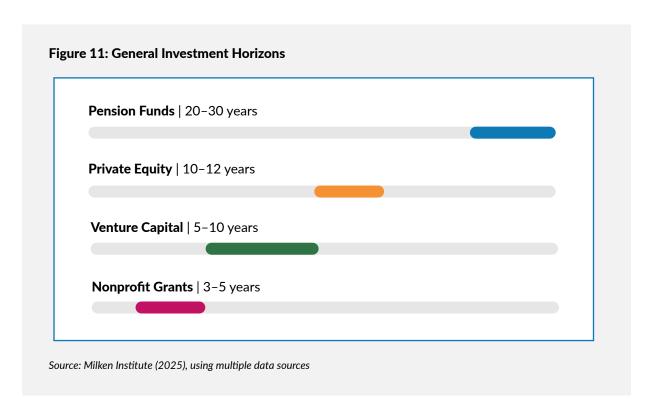


Current active trials require recruiting 50,000 participants from diverse backgrounds. The duration and costs of drug development are staggering. From the start of phase 1 to the conclusion of phase 3 and adding on 6 to 12 months of regulatory approval time, the average duration of trials is approximately 13 years, and the average cost of trials is approximately \$5.7 billion.³⁶

Investing for new Alzheimer's therapeutics can take 13 years and \$5.7 billion from preclinical trials to regulatory approval.

How Investors and Researchers Can Identify Opportunities amid the Challenges

When developing a longevity investment and research portfolio, it is important to evaluate opportunities across the investment horizon (see Figure 11) and dementia continuum (see Figure 12).³⁷ Investors and researchers should recognize the longer investment return horizons required when striving to improve dementia care and adjust portfolio strategies accordingly.



The timelines for impacting cognitive health and dementia are long. Pathological processes in the brain start to occur up to 15 to 20 years before symptoms manifest, and the time to advance new therapeutics from drug discovery to market continues to be nearly 13 years.³⁸

Researchers and investors should consider efforts across short-, medium-, and long-term horizons when investing in longevity and understand the appropriate timelines needed to demonstrate improved outcomes associated with dementia care.

Figure 12: Investing Across the Dementia Continuum

Global Prevention

Global promotion of cognitive health and risk reduction interventions (e.g., hearing loss)

Targeted Treatments

Discovery of molecular and genetic basis for effective treatment development, approval, and reimbursement

Detection and Diagnosis

Timely detection and accurate diagnosis pathways, protocols, and reimbursement

Source: Milken Institute (2025)

Care and Support

Equitable and accessible care and support programs for people living with dementia and their care partners

Global Prevention

Invest in initiatives that address the global awareness of known modifiable risk factors to lower the projected increasing cost and prevalence trends.

Globally, public health institutions and policymakers are acknowledging the Brain Economy as a key driver of economic growth; however, large-scale population health initiatives must assume long investment horizons to demonstrate outcomes. Public-private partnerships can offer such opportunities to take a longer-term time horizon in an effort to bend the curve of projected dementia trends over the next 25 years.

As an example of one global initiative, the evidence-based <u>World-Wide FINGERS</u> network now involves research teams from 70 countries and is focused on implementing the "five finger protocol" of healthy food, physical activity, mental stimulation, social activities, and cardiovascular health. A similarly designed US-based trial, <u>US POINTER</u>, plans to announce topline results in July 2025.

The 2024 Lancet Commission has further identified the potential impact of these healthy lifestyle measures, detailing the 14 known modifiable risk factors that, over the life course, contribute to an aggregate of 45 percent of dementia cases.³⁹

Detection and Diagnosis

Invest in tools and programs for early detection that can be integrated into clinical pathways to support timely and accurate diagnosis.

In the US, only about 16 percent of people aged 65 and older report receiving a cognitive assessment during a routine visit with their primary care provider (PCP).⁴⁰ In the UK, although diagnosis rates are higher, only 40 percent of referrals to memory clinics include a cognitive assessment by a PCP.⁴¹ A lack of cognitive assessments may be attributed to clinical staffing shortages. In an effort to address these shortages, the deployment of telemedicine to connect rural communities, development of artificial intelligence to aid detection and diagnosis, and expansion of cognitive care by primary care and non-neurologist physicians and advanced practitioners will help improve access to screening, early detection, and diagnosis for people at risk of dementia.⁴² Improving early detection of cognitive impairment and dementia will require the advancement and adoption of blood-based biomarkers, digital cognitive assessments, and other innovations by PCPs, specialists, and health professionals in the community, such as community health workers, working in coordination.

Health systems will need targeted programs for education, training, and workflow integration as early detection in communities grows in prominence. As one example of such an effort, the <u>UK Dementia Goals Programme</u>'s programs both characterize and implement scalable and accessible biomarkers in close association with health-care systems, through <u>international initiatives</u> with US groups such as the Global Alzheimer's Platform Foundation.⁴³

Targeted Treatments

Invest in understanding the molecular and genetic basis of dementia to advance biomarker and therapeutic developments toward more effective treatments.

Health-care economics research has found that investing in dementia care is cost-effective. In the UK, an economic review of dementia research showed that each pound invested generated a 2.59-times economic gain.⁴⁴ An economic model developed using the US population showed that a therapeutic that delays Alzheimer's disease onset by five years would reduce the prevalence of Alzheimer's disease in 2050 by 25 percent; if all eligible patients were treated, the cumulative savings from 2022 to 2050 would be \$3.1 trillion.⁴⁵

Research is finding that the majority of dementias arise from mixed pathologies.⁴⁶ Therefore, pathologies of Alzheimer's disease are likely to be found within other forms of dementia. Systematic mapping of the overlaps and distinctions between these diseases will enable precision medicine and generate a pipeline of therapeutics that can be concomitantly tailored to various underlying pathologies. Further, a broad set of drug targets outside the Amyloid Hypothesis should continue to be prioritized so that no approach goes unresearched.

Care and Support

Invest in equitable and accessible caregiving and social support programs for people living with dementia and their caregivers to improve their quality of life.

Investing in tools and aids for people living with dementia to maintain as much independence with ADLs for as long as possible will positively impact the quality of life for the individual and their families. Older adults with dementia may be able to continue living in their own homes if they receive adequate in-home

care, guidance, and support for appropriate home modifications. <u>Connected care at home</u> is receiving attention and investment as health-care delivery shifts outside traditional hospital settings into the home.

Patient care navigation is an important segment of care that desperately needs attention and investment to bridge the often-fragmented experience of coordinating medical and social care. In the US, the Guiding an Improved Dementia Experience (GUIDE) model by the Centers for Medicare & Medicaid Services is a positive step toward offering training, respite care, and home assessments.⁴⁷ As phase 2 launches in July 2025, investors should identify ways to address continued barriers to adoption and ways to replicate the model in Medicare Advantage. The National Dementia Care Collaborative is an example of a nonprofit initiative invested in scaling and supporting comprehensive dementia care.

Whether a family is early in their diagnostic journey, recently diagnosed and searching for care, managing progressive dementia symptoms, or planning for end of life, health systems must be able to connect care and community resources to improve experiences for people living with dementia and their caregivers.

A Collective Call for Collaborative Research and Investment

Solving the complex and pressing challenges of dementia is essential to drive forward improved healthspans—and requires collaboration in research and investment. The more countries, health systems, researchers, investors, and patient advocacy groups work together to tackle the complexities of dementia, the more likely we will find a cure. As mentioned, the current clinical successes experienced through decades of foundational research and investment are not guaranteed to continue if sufficient research and investment are not sustained.

Research has shown that investment in research and development spurs innovation, invention, and progress. There is a positive correlation between funding and research output. Research should prioritize understanding the molecular and genetic basis of dementia and identifying biomarkers for early detection and monitoring, and private investment can catalyze those insights into the development of targeted therapies to help mitigate the effects of this debilitating family of diseases.⁴⁸

In a 2021 report, <u>Roadmap for Investment in Dementia Care</u>, the Milken Institute reviewed the International Alzheimer's Disease Research Portfolio database. The database is created and maintained by the NIH National Institute on Aging and the NIH Library and serves as a critical resource for tracking funding and projects. Since the last report in December 2021, more than 16,000 new projects have been added to the database, representing an increase of 55 percent. Total funding increased 69 percent from \$14.6 billion to \$24.7 billion. Although funding has increased, only 5.3 percent (\$1.3 billion) was devoted to improving current dementia care and impact of disease, while 33 percent was devoted to studying drug development aspects including the molecular pathogenesis and physiology.

Governments across the world should recognize the massive underfunding dementia receives in relation to other serious health conditions and devise action plans to align resources proportional to the economic impact.

A UK Case Study: Continued Underfunding in Dementia Despite Leading Cause of Death

Resulting in more than 1 in 10 deaths nationwide, dementia remains the leading cause of death in the UK. The chronic underfunding of dementia research has had detrimental effects on advancements in the field. Despite the substantial economic costs and high prevalence of dementia, funding allocations remain disproportionately low, especially when compared to other leading causes of morbidity such as cancer or heart disease. This discrepancy is particularly pronounced in the UK, where spending on aging-related issues, including dementia, pales in comparison to the significant economic and disability impact it imposes (see Figure 13).⁴⁹

Figure 13: UK Spending Attributed to Top Diseases

Disease	UK spending on disease per person per year	Cost to the economy per person per year	Percent of all deaths (%)	Percent of all disability (%)
Cancer	£9.50	£250	29	2
Heart	£2.70	£125	19	5
Dementia	£0.82	£360	4	11
Stroke	£0.37	£80	9	9

Source: Milken Institute (2025), adapted from Guy Brown (2024)

In the UK, funding for cancer research surpasses that for dementia by a staggering tenfold, despite dementia contributing five times as much morbidity as cancer. This imbalance is further highlighted by the fact that for every one dementia researcher there are four cancer researchers.

UK Call to Action

The UK government has pledged to address this disparity by doubling dementia research funding to £160 million per year by 2025. Nevertheless, the cost of dementia to the UK for 2024 is forecast to be £42 billion, rising to £90 billion without second-wave treatments by 2040.⁵⁰

Examples of Collaborative Global Initiatives for Dementia

From regulatory bodies streamlining review and approval processes of potential new drugs, to increasing attention on social care supports, global initiatives are helping pave the way for an improved experience for people at risk for or living with dementia and their care partners.

<u>AD-RIDDLE</u>: Working to bridge the gap between research and precision medicine to help people better understand what they can do to mitigate and slow cognitive decline.

<u>Alzheimer's Disease Data Initiative</u>: Leading us to a future where open data and global collaboration power the end of ADRD.

<u>Alzheimer's Disease International</u>: Coordinating international Alzheimer's disease and dementia associations around the work with a vision for risk reduction, timely diagnosis, care, and inclusion today, and cure tomorrow.

<u>Davos Alzheimer's Collaborative</u>: Uniting leading organizations worldwide to build an innovative ecosystem to accelerate breakthroughs, develop and scale promising solutions, and equip every health-care system to end Alzheimer's disease everywhere.

<u>Global Alzheimer's Platform Foundation</u>: Speeding the delivery of innovative therapies to those living with Alzheimer's disease and Parkinson's disease by reducing the time and cost of clinical trials.

<u>Global Council on Brain Health</u>: Providing trusted information on how to maintain and improve brain health, with a network of more than 200 experts and liaisons representing 30 countries.

<u>PREDICTOM</u>: Bringing dementia diagnostics closer to the public through a customizable cognitive and biomarker screening platform.

<u>UK Biobank</u>: Building the world's most advanced source of data for health research, helping the life science sector to transform health care for people across the UK and worldwide.

World Dementia Council: Bringing together global policymakers and leaders in dementia to explore solutions to new and emerging challenges facing people living with dementia.

<u>World Health Organization Global Action Plan on Dementia</u>: Aiming to improve the lives of people with dementia, their carers, and families, while decreasing the impact of dementia on communities and countries.

Where We Go from Here

This report discusses dementia's impact on individuals, families, communities, and countries, ultimately shortening healthspans and contributing to the healthspan-lifespan gap. However, recent clinical innovations based on decades of research and funding have the potential to improve healthspan if nations implement these innovations with urgency and continue to invest in four key domains: (1) global prevention, (2) detection and diagnosis, (3) targeted treatments, and (4) care and support.

The Milken Institute launched the Alliance to Improve Dementia Care in 2020 and convenes a coalition of more than 135 organizations from the public, private, and nonprofit sectors to transform and improve the fragmented care systems that people at risk for or living with dementia and their caregivers must navigate. The Alliance drives forward initiatives to (1) promote prevention and early detection and diagnosis, (2) build workforce and systems capacity to accelerate adoption of innovations in diagnostics and treatments, and (3) scale comprehensive dementia-care models. The Alliance will continue to convene global collaborators striving to improve the lives of people at risk for or living with dementia, their caregivers, and their families.

Globally, the importance of brain health is emerging as a critical component of healthy aging, as evidenced by large-scale initiatives such as WHO's Global Action Plan for Dementia and the designation of the decade 2020–2030 as the Decade of Healthy Aging. To build on the significant strides in longevity achieved during the 20th century, we should adopt an even bolder vision by declaring the 21st century (i.e., 2000–2100) as the "Century of Thriving." Such a shift would emphasize not only living longer but also living healthier longer by promoting brainspan as a core component of a longer healthspan. This shift would enable societies worldwide to benefit from the collective wisdom and contributions that can only be accumulated through a life well-lived into old age.

This vision can only be achieved and supported through thoughtful, intentional longevity investing with a focus on cognitive health, which, if not addressed, can lead to dementia and critically limit healthspan for individuals. By fostering advancements in biotechnology, health-care and social care delivery, and risk-reducing lifestyles, longevity investing can catalyze the transformation needed to ensure that thriving—not just surviving—becomes the hallmark of our era.

Appendix

Anti-Amyloid Monoclonal Antibody Regulatory Approval Status

As of June 2025, Leqembi, developed in partnership by Biogen and Eisai and marketed by Eisai, is approved in the United States, Japan, China, South Korea, Hong Kong, Israel, United Arab Emirates, United Kingdom, Mexico, and the European Union, and is under review in 14 countries and regions. As of October 2024, Australia's Therapeutic Goods Administration decided not to approve the drug because the demonstrated efficacy did not outweigh the safety risks.

As of June 2025, Kisunla, developed and marketed by Eli Lilly & Co., is approved in four markets: the United States, Japan, the United Kingdom, and China.⁵³ In late March 2024, the European Medicines Agency recommended the refusal of marketing authorization of Kisunla for countries in the European Union, citing safety concerns about amyloid-related imaging abnormalities, although a final decision is pending after a request for re-examination.⁵⁴ Although approved by the UK medicines regulator, the National Institute for Health and Care Excellence, issued final guidance that amyloid antibodies should not be made available on the National Health Service—citing that the benefits are too limited to justify the costs.⁵⁵

While governmental and health-care stakeholders continue to grapple with challenges concerning reimbursement and access to these treatments, their approval highlights that meaningful progress toward disease-modifying treatments is being made.

Endnotes

- 1. Saloni Dattani and Lucas Rodés-Guirao, "Life Expectancy," Our World in Data, accessed June 4, 2025, https://ourworldindata.org/life-expectancy.
- 2. Renee Stepler, "World's Centenarian Population Projected to Grow Eightfold by 2050," Pew Research Center, April 21, 2016, https://www.pewresearch.org/short-reads/2016/04/21/worlds-centenarian-population-projected-to-grow-eightfold-by-2050/.
- 3. "Dementia Statistics," Alzheimer's Disease International, accessed June 4, 2025, https://www.alzint.org/about/dementia-facts-figures/dementia-statistics/#:~:text=Numbers%20of%20people%20with%20dementia,Asian%20and%20western%20Pacific%20neighbours.
- 4. "Dementia," World Health Organization, March 31, 2025, https://www.who.int/news-room/fact-sheets/detail/dementia.
- 5. Global Status Report on the Public Health Response to Dementia (World Health Organization, 2021), https://iris.who.int/bitstream/handle/10665/344701/9789240033245-eng.pdf?sequence=1.
- 6. Armin Garmany, Satsuki Yamada, et al., "Longevity Leap: Mind the Healthspan Gap," NPJ Regenerative Medicine 6, no. 1 (September 23, 2021): 57, https://doi.org/10.1038/s41536-021-00169-5.
- 7. eCampusOntario, "Life Expectancy vs. Lifespan," *Always Developing*, accessed June 4, 2025, https://ecampusontario.pressbooks.pub/alwaysdeveloping/chapter/life-expectancy-vs-lifespan/#:~:text=Life%20Expectancy%20vs.-,Lifespan,years%20in%20the%20United%20States.
- 8. Garmany et al., "Longevity Leap: Mind the Healthspan Gap."
- 9. Garmany et al., "Longevity Leap: Mind the Healthspan Gap."
- 10. Leaving No One Behind: World Social Report 2023 (United Nations Department of Economic and Social Affairs, Chapter 1, February 8, 2023), https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2023/01/2023wsr-chapter1-.pdf.
- 11. Phil Newman and Christine Belleza, *Annual Longevity Investment Report 2024* (Longevity.Technology, accessed June 27, 2025), https://longevity.technology/investment/report/annual-longevity-investment-report-2024/.
- 12. Anthony Garmany and Andre Terzic, "Global Healthspan-Lifespan Gaps Among 183 World Health Organization Member States," *JAMA Network Open* 7, no. 12 (December 11, 2024): e2450241, https://doi.org/10.1001/jamanetworkopen.2024.50241.
- 13. Goal A2: Better Understand the Biology of Aging and Its Impact on Prevention, Progression, and Prognosis of Disease and Disability (National Institute on Aging, 2020), https://www.nia.nih.gov/sites/default/files/2020-05/nia-strategic-directions-2020-2025.pdf.
- 14. PS Sachdev, D. Blacker, et al., "Classifying Neurocognitive Disorders: the DSM-5 Approach," *Nature Reviews Neurology* 10, no. 11 (September 30, 2014): 634–642, https://doi.org/10.1038/nrneurol.2014.181.

- 15. Bruno Dubois, et. al., "Biomarkers in Alzheimer's Disease: Role in Early and Differential Diagnosis and Recognition of Atypical Variants, *Alzheimer's Research & Therapy* 15, no. 1 (October 13, 2023): 1314, https://doi.org/10.1186/s13195-023-01314-6.
- Adam L. Boxer and Reisa A. Sperling, "Accelerating Alzheimer's Therapeutic Development: The Past and Future of Clinical Trials," *Cell* 186, no. 22 (October 26, 2023): 4757–4772, https://doi.org/10.1016/j.cell.2023.09.023.
- 17. Clifford R. Jack, et al., "Revised Criteria for Diagnosis and Staging of Alzheimer's Disease: Alzheimer's Association Workgroup," *Alzheimer's & Dementia* (June 27, 2024), https://doi.org/10.1002/alz.13859.
- 18. "Activities of Daily Living," Cleveland Clinic, accessed June 24, 2025, https://my.clevelandclinic.org/ health/articles/activities-of-daily-living-adls.
- 19. "Dementia," World Health Organization.
- Silvia Duong, Tejal Patel, et al., "Dementia: What Pharmacists Need to Know," Canadian Pharmacists
 Journal (February 7, 2017), https://doi.org/10.1177/1715163517690745; Richard A. Goodman,
 Kimberly A. Lochner, et al., "Prevalence of Dementia Subtypes in United States Medicare Fee-for-Service Beneficiaries, 2011–2013," Alzheimer's & Dementia 13, no. 1 (May 9, 2016): 28–37, https://doi.org/10.1016/j.jalz.2016.04.002.
- 21. Boxer and Sperling, "Accelerating Alzheimer's Therapeutic Development."
- 22. Lisa Ann Kirk Wiese, Allison Gibson, et al., "Global Rural Health Disparities in Alzheimer's Disease and Related Dementias," *Alzheimer's & Dementia* 19, no. 9 (May 23, 2023): 4204–4225, https://doi.org/10.1002/alz.13104.
- 23. Pei-Jung Lin, Allan T. Dally, et al., "Dementia Diagnosis Disparities by Race and Ethnicity," *Medical Care* 59, no. 8 (August 2021), 679–686, https://doi.org/10.1097/MLR.000000000001577.
- 24. Soeren Mattke, et. al. "Expected and Diagnosed Rates of Mild Cognitive Impairment and Dementia in the US Medicare Population: Observational Analysis," Alzheimer's Research & Therapy 15 (July 22, 2023): 128, https://doi.org/10.1186/s13195-023-01272-z/; Halima Amjad, et al., "Hospitalization Outcomes Among Older Adults Living Undiagnosed or Unaware of Dementia, Alzheimer's & Dementia 17 (January 26, 2025), https://pmc.ncbi.nlm.nih.gov/articles/PMC11736704/; "Dementia," World Health Organization; Laura Skufca and Gerard Rainville, "Caregiving Can Be Costly-Even Financially," AARP Public Policy Institute, June 29, 2021, https://www.aarp.org/pri/topics/ltss/family-caregiving/ family-caregivers-cost-survey/; "Dementia Statistics," Alzheimer's Disease International; Daniel Cantarero-Prieto, Paloma Lanza Leon, et al., "The Economic Cost of Dementia: A Systematic Review," Dementia 19, no. 8 (March 25, 2019): 2637-2657, https://doi.org/10.1177/1471301219837776; The Economic Impact of Dementia (Carnall Farrar, May 2024), https://www.carnallfarrar.com/wpcontent/uploads/2024/06/The-economic-impact-of-dementia-CF.pdf; "Costs of Alzheimer's to Medicare and Medicaid Fact Sheet," Alzheimer's Impact Movement, accessed January 6, 2025, https://portal-legacy.alzimpact.org/media/serve/id/62509c7a54845#:~:text=Alzheimer's%20is%20 one%20of%20the,more%20than%2022%20times%20higher; "Costs of Alzheimer's to Medicare and Medicaid Fact Sheet," Alzheimer's Impact Movement; Richard Fry and Dana Braga, "The Growth of the Older Workforce," Pew Research Center, December 14, 2023, https://www.pewresearch.org/ social-trends/2023/12/14/the-growth-of-the-older-workforce/; Steve Hendriks, Kirsten Peetoom,

- et al., "Global Prevalence of Young-Onset Dementia: A Systematic Review and Meta-analysis," *JAMA Neurology* 78, no. 9 (July 19, 2021): 1080–1090, https://doi.org/10.1001/jamaneurol.2021.2161; "Cognitive Impairment in the Workplace," Bank of America, accessed July 9, 2025, https://business.bofa.com/en-us/content/workplace-benefits/cognitive-impairment-and-dementia-in-the-workplace.html.
- 25. "The Top 10 Causes of Death," World Health Organization, August 7, 2024, https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death.
- 26. Hannah Schneider and Robbie Appleton-Sas, "The 78th World Health Assembly Agrees to Extend the Global Action Plan on the Public Health Response to Dementia," *Alzheimer's Disease International*, May 23, 2025, <a href="https://www.alzint.org/news-events/news/the-78th-world-health-assembly-agrees-to-extend-the-global-action-plan-on-the-public-health-response-to-dementia/#:~:text=ADI%20is%20 pleased%20to%20share,who%20presently%20are%20living%20with.
- "From Plan to Impact VIII: Progress Towards Targets of the WHO Global Action Plan on Dementia,"
 Alzheimer's Disease International, May 21, 2025, https://www.alzint.org/resource/from-plan-to-impact-viii/.
- 28. Towards a Dementia Plan: A WHO Guide (World Health Organization, May 24, 2018), https://iris.who.int/bitstream/handle/10665/272642/9789241514132-eng.pdf.
- 29. Dementia: A Public Health Priority (World Health Organization, August 24, 2021), https://www.who.int/publications/i/item/dementia-a-public-health-priority.
- 30. "State Alzheimer's Disease Plans Fact Sheet," Alzheimer's Impact Movement, March 2024, accessed July 8, 2025, https://portal-legacy.alzimpact.org/media/serve/id/5d23af19258fb.
- 31. "National Aging Readiness Indicators," West Health and Mosaic, accessed June 4, 2025, https://www.https://www.ntional-aging-readiness?tab=national.
- 32. Lawren VandeVrede and Suzanne Schindler, "Clinical Use of Biomarkers in the Era of Alzheimer's Disease Treatments," *Alzheimer's & Dementia* (December 30, 2024), https://doi.org/10.1002/alz.14201.
- 33. "National Alzheimer's Project Act," Alzheimer's Impact Movement, accessed June 4, 2025, https://alzimpact.org/napa; "Alzheimer's Disease Including Alzheimer's Disease Related Dementias (AD/ADRD)," National Institutes of Health, June 17, 2025, https://report.nih.gov/funding/categorical-spending#/.
- 34. Jeffrey L. Cummings et al., "Alzheimer's Disease Drug Development Pipeline: 2025," *Translational Research & Clinical Interventions*, 11, no. 2 (June 3, 2025), https://doi.org/10.1002/trc2.70098.
- 35. Cummings et al., "Alzheimer's Disease Drug Development Pipeline: 2025."
- 36. Jeffrey Cummings, Yadi Zhou, et al., "Alzheimer's Disease Drug Development Pipeline: 2024," Alzheimer's & Dementia: Translational Research & Clinical Interventions (April 24, 2024), https://doi.org/10.1002/trc2.12465; James Galvin, Paul Aisen, et al., "Early Stages of Alzheimer's Disease: Evolving the Care Team for Optimal Patient Management," Frontiers in Neurology 11 (January 22, 2021): 737–744, https://doi.org/10.3389/fneur.2020.592302.

- 37. Public Pension Plan Investment Return Assumptions (NASRA, June 2025), https://www.nasra.org/files/ Issue%20Briefs/NASRAInvReturnAssumptBrief.pdf; Richard Lehman, "Time Horizon," Moonfare Glossary, May 26, 2025, https://www.moonfare.com/glossary/time-horizon; Tessa Campbell, "What Is Venture Capital," Business Insider, December 6, 2024, https://www.businessinsider.com/personal-finance/investing/venture-capital; Hannah Smith, "Using Multiyear Funding to Supercharge Your Grantmaking," Exponent Philanthropy Blog, April 8, 2024, https://exponentphilanthropy.org/blog/using-multiyear-funding-to-supercharge-your-grantmaking/.
- 38. Galvin et al., "Early Stages of Alzheimer's Disease."
- 39. Gill Livingston, Jonathan Huntley, et al., "Dementia Prevention, Intervention, and Care: 2024 Report of the Lancet Standing Commission," *The Lancet* 404, no. 10452 (August 10, 2024): 572–628, https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(24)01296-0/abstract.
- 40. Alzheimer's Facts and Figures 2019 (Alzheimer's Association, March 1, 2019), https://www.alz.org/media/documents/alzheimers-facts-and-figures-2019-r.pdf.
- 41. Nicole Fowler, Lisa Morrow, et al., "Cognitive Impairment in Older Adults Attending Primary Care: Screening and Case-Finding Using Electronic Medical Records," *Diagnostic Assessment & Prognosis* 1, no. 3 (July 21, 2015):349–357, https://alz-journals.onlinelibrary.wiley.com/doi/pdf/10.1016/j.dadm.2015.06.009.
- 42. Adrian Burton, "How Do We Fix the Shortage of Neurologists?" *The Lancet Neurology* (June 2018), https://www.thelancet.com/journals/laneur/article/PIIS1474-4422(18)30143-1/fulltext.
- 43. "UK and US Join Forces to Tackle Dementia with Innovative Biomarkers," UK Research and Innovation, July 10, 2024, https://www.ukri.org/news/uk-and-us-join-forces-to-tackle-dementia-with-innovative-biomarkers/.
- 44. The Economic Value of Dementia Research: July 2023 (Alzheimer's Research UK, July 2023), https://www.alzheimersresearchuk.org/wp-content/uploads/2023/07/Economic-Value-of-Dementia-Research-July-2023.pdf.
- 45. Amir Abbas Tahami Monfared, Ali Tafazzoli, et al., "A Simulation Model to Evaluate the Potential Impact of Disease-Modifying Treatments on Burden of Illness in Alzheimer's Disease," *Neurology and Therapy* 11, no. 4 (August 12, 2022):1609–1623. https://doi.org/10.1007/s40120-022-00393-1.
- 46. Boxer and Sperling, "Accelerating Alzheimer's Therapeutic Development."
- 47. "Guiding an Improved Dementia Experience (GUIDE) Model," Centers for Medicare & Medicaid Services, accessed June 4, 2025, https://www.cms.gov/priorities/innovation/innovation-models/guide.
- 48. Rachel Heyard and Hanna Hottenrott, "The Value of Research Funding for Knowledge Creation and Dissemination: A Study of SNSF Research Grants," *Humanities and Social Sciences Communications* 8, no. 217 (September 21, 2021), https://doi.org/10.1057/s41599-021-00891-x.
- 49. Guy Brown, "Living Too Long: The Current Focus of Medical Research on Increasing the Quantity, Rather than the Quality, of Life Is Damaging Our Health and Harming the Economy," *EMBO Reports* 16, no. 2 (December 18, 2024): 137–141, https://doi.org/10.15252/embr.201439518.
- 50. "The Critical Role of Dementia Discovery Research," UK Dementia Research Institute, 2023, https://www.ukdri.ac.uk/policies/critical-role-dementia-discovery-research.

- 51. "Leqembi® (Lecanemab) First Medicine to Slow Progression of Early Alzheimer's Disease Now Approved in 14 Countries and Regions," Biogen, April 15, 2025, <a href="https://investors.biogen.com/news-releases/news-release-details/leqembir-lecanemab-first-medicine-slows-progression-early#:~:text=Lecanemab%20has%20been%20approved%20in,in%2014%20countries%20and%20 regions.
- 52. "TGA's Decision Not to Register Lecanemab (Leqembi)," Therapeutic Goods Administration, Australian Government, October 16, 2024, https://www.tga.gov.au/news/news/tgas-decision-not-register-lecanemab-leqembi.
- 53. "Lilly's Kisunla™ (Donanemab) Approved in China for Treatment of Early Alzheimer's Disease," Eli Lilly and Company, December 17, 2024, https://investor.lilly.com/news-releases/news-release-details/lillys-kisunlatm-donanemab-azbt-approved-china-treatment-early.
- 54. "Kisunla," European Medicines Agency, accessed April 7, 2025, https://www.ema.europa.eu/en/medicines/human/EPAR/kisunla.
- 55. Quang Tran, "NHS Patients Denied New Alzheimer's Drugs," accessed June 20, 2025, https://www.alzheimers-drugs/.

Acknowledgments

Our work depends on the efforts of many colleagues who share our aspirations. We offer special thanks to our Alliance to Improve Dementia Care Steering Committee: AARP, Alzheimer's Association, Alzheimer's Drug Discovery Foundation, Bank of America, Biogen, BrightFocus Foundation, CaringKind, Dementia Discovery Fund, Edward Jones, Eisai, Eli Lilly and Company, Gates Ventures, Genentech, Institute for Healthcare Improvement, The John A. Hartford Foundation, Lundbeck, Novo Nordisk, Otsuka, The SCAN Foundation, Washington University in St. Louis, and The Gary and Mary West Foundation.

About the Authors

Michael T. Brown is a director on the Future of Aging team within Milken Institute Health, where he leads the Alliance to Improve Dementia Care, focusing on building impactful programs and fostering consensus among diverse stakeholders to address the complex health-care challenges of brain health and dementia care. As a health-care professional with over a decade of experience in corporate strategy, health-care partnerships, and business development, he has led initiatives in value-based care, cross-sector collaborations, and digital health innovations. Before joining the Milken Institute, he was the director of business development at Altoida, a venture-backed software as a medical device company developing digital cognitive assessments. He began his career at CareFirst BlueCross BlueShield in the innovation division, Healthworx, where he led due diligence efforts for acquisitions, corporate venture capital investment, and strategic partnerships. He holds an MBA in health management from Johns Hopkins University Carey Business School and an undergraduate degree from Saint Joseph's University in pharmaceutical and healthcare marketing.

Diane Ty is the managing director of the Milken Institute Future of Aging, leading its work in advancing healthy longevity and financial security for all through a life course perspective on aging and longevity. She oversees the Future of Aging's strategic direction and operations, including the Alliance to Improve Dementia Care and other multisector programmatic efforts that promote policy, practice, and systems change. Ty is a senior advisor at Georgetown University's Business for Impact at the McDonough School of Business, where she previously led consulting engagements in health and financial security and founded the AgingWell Hub and Portion Balance Coalition. She began her career at American Express Company, spending a decade in marketing roles across the consumer, business, and government sectors. She later held nonprofit executive roles at Save the Children, where she led its Millennial-focused work and launched the Effie-winner and Emmy-nominated Ad Council campaign "Do Good: Mentor A Child." At AARP Services, she architected strategic alliances, and at AARP, she led the development of its Social Security and retirement calculators and spearheaded its under-50 engagement efforts, earning a gold-level IDEA award in design strategy. Ty earned her BA from Duke University and dual degrees from the University of Pennsylvania as a Lauder Institute fellow: an MBA from the Wharton School and an MA from the School of Arts and Sciences. She is on the board of Capital Caring Health and a gubernatorial appointee on the Maryland State Commission on Aging.

Christian Jung, PhD, is a partner at SV Health Investors, coleading the Dementia Discovery Fund, the world's largest family of specialized venture capital funds that invests exclusively in companies developing or enabling novel therapeutics for dementia. He currently represents the fund on the boards of Amphista Therapeutics Ltd., Harness Therapeutics Ltd., and LoQus23 Therapeutics Ltd. Prior to joining SV, Jung held roles with Wellington Partners Life Sciences and High-Tech Gründerfonds, Europe's leading seed fund with €1.4 billion under management. There, Jung structured and completed the seed- and early-stage investments in nine life sciences companies, including Amal Therapeutics SA (acquired by Boehringer Ingelheim in 2019 for up to €325 million), Cunesoft GmbH (acquired by Phlexglobal in 2020 for an undisclosed amount), and Rigontec GmbH (acquired by MSD in 2017 for up to €464 million). Jung was awarded a PhD with distinction in medical science and technology for his work on patient-specific induced pluripotent stem cells and obtained his MSc in molecular biotechnology, both from the Technical University of Munich. The key articles generated in the context of his PhD were published in the *New England Journal of Medicine*, *EMBO Molecular Medicine*, and *FASEB Journal* and have so far been cited more than 1,000 times.

