

# Healthy Heart for Healthy Aging:

The Need for Awareness,  
Innovation, and Collaboration  
in Cardiovascular Health



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# Executive Summary

Advancements in sanitation, medical innovation, and health education across the 20th century have given global society the tools to tackle communicable diseases and monitor and maintain well-being. The result has been one of the greatest gifts of our time—our longevity. We can choose to view this unprecedented longevity as the most vexing challenge of our 21st century, or we can turn it into our most celebrated success. With continued awareness-building, innovation, and multi-stakeholder collaboration, we can ensure our longevity is accompanied by health and independence rather than disability and dependence.

To that end, as global population aging accelerates, policy organizations around the world must take action to proactively address age-related health challenges and needs. Cardiovascular diseases (CVDs) are foremost among these challenges, with rising prevalence and health and economic impacts. By focusing on cardiovascular health to achieve healthier aging, policymakers can and should directly address the CVD challenge to ensure a sustainable course.

In this paper, we: (1) examine the cardiovascular health imperative aligned with population aging; (2) demonstrate the momentum from the global health community that makes now the opportune time to advance a healthy aging agenda for cardiovascular diseases; and (3) call for specific policy actions to lead that change through innovations in cardiovascular health. The three areas for action where policy change and increased societal recognition are needed include:

**Awareness:** Meaningful policy action on CVDs must promote awareness and education amongst the public, patients, caregivers, and healthcare professionals to empower healthy choices that reduce risk for CVDs and related health challenges.

**Innovation:** Policy-makers must recognize that innovation moves primarily through incremental advances, so we must accept a research paradigm aligned with this stepwise progression.

**Collaboration:** Effectively addressing the direct and indirect impacts of CVDs will require policies and platforms that engage a wide range of actors, including government agencies, health systems, the private sector, non-profits, multilateral organizations, and advocacy groups.

# Introduction



It is a challenging journey for me and millions of other patients with a cardiovascular disease such as PAD. This chronic condition makes simple things that you normally take for granted very difficult, like walking, kneeling or bending over. Therefore we need new and innovative medicines that really help us to improve our daily lives.”

– Gill Holman, Patient with Peripheral Artery Disease (PAD)

One of the 21st century’s most pervasive mega-trends is the aging of our global society. We are living in an era with unprecedented longevity and declining birth rates, which together are rapidly transforming society. Demographic trends show a future defined by more people over the age of 60 than under 15 for the first time in human history.<sup>1</sup> In the face of this trend, we need to move collectively to update policies, reform institutions, and change culture to meet the demand for innovation in an increasingly aging society. This brings about a vexing and profound question for society in the aging context: How can we sustain economic growth, and improve quality of life, to ensure that longevity is recognized as a healthy human condition, and not an unsustainable burden as so often suggested? In this paper, we examine this question through the lens of cardiovascular diseases: one of the most pressing age-related health challenges facing our world.

## Investments in Healthy Aging Today Are Investments in Our Future

By mid-century, there will be 2 billion people over age 60 globally and more old than young.<sup>2</sup> Given this scenario, it is time for policy-makers to prioritize thinking on this topic, allocate resources, and budget for the needs of our aging societies. Time and time again, societies have proven this collective public decision process and spent trillions of dollars on investments with long-term payback, such as fighting polio or responding to the HIV/AIDS crisis.<sup>3,4</sup> Using this strategic framework, there are undoubtedly a multitude of worthy causes from which to prioritize, but today's investments should be centered on the levers that can most dramatically enhance individuals' health and well-being, thereby increasing the chances of their continued economic and social contributions as they age. This will also have a cascading impact on reducing or mitigating costs and improving outcomes for generations to come.

Critically, older people are key contributors to economies, societies, and political systems around the world. The labor force participation rate amongst adults over age 60 has been steadily rising in advanced economies in Europe, Asia, and North America, indicating the growing value of older workers.<sup>5</sup> Older people also contribute to the economy as consumers; for example, adults in the Baby Boomer generation control 70% of all disposable income in the United States.<sup>6</sup> Older people also contribute to their families and societies by providing child and elder care, financial support, and intergenerational knowledge. For example, a record-breaking 18% of the world's population are grandparents, who often help with child care and other important family needs.<sup>7</sup> Finally, older people are also significantly more likely to vote in national elections, which establishes their influence in policy decision-making.<sup>8</sup>

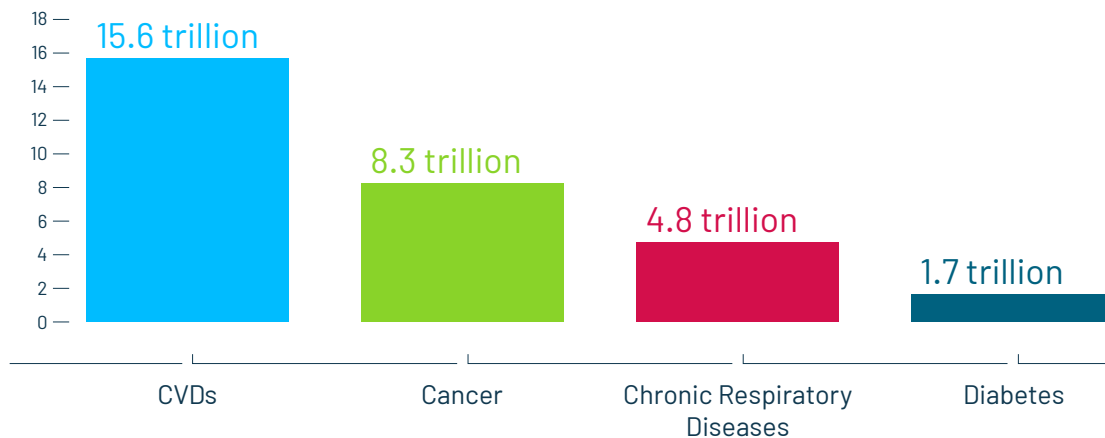
## Focusing on Cardiovascular Health to Achieve Healthier Aging Will Reduce Public Health Spending

We are now at the proverbial tipping point where public and private investment decisions on aging policy will greatly impact today and the future. Yet, we still have health systems that do not proactively recognize prevention strategies and innovative treatments as pathways to a healthier, active, and more productive aging society. Spending to support cardiovascular health is a top priority in this dynamic, as CVDs are the number

one cause of death worldwide.<sup>9</sup> As such, CVDs have a powerful and detrimental effect on individuals' quality of aging as well as the most explosive impact on collective public health costs—both with respect to direct economic impact and the growing understanding of CVDs' connections to other age-related conditions, from Alzheimer's disease and diabetes to frailty and even mental health. Because the impact of CVDs on individuals, health systems, and society at-large is massive, cardiovascular health represents a powerful leverage point for advancing the global healthy aging agenda. Action now can change the trajectory of CVD impact and pave the way to healthier lives.

### Economic Burden of “Big 4” NCDs (2011-2030)

Lost economic output (USD, trillions)



Source: World Economic Forum and Harvard School of Public Health, “The Global Economic Burden of Non-communicable Diseases,” 2011, [http://www3.weforum.org/docs/WEF\\_Harvard\\_HE\\_GlobalEconomicBurdenNonCommunicable-Diseases\\_2011.pdf](http://www3.weforum.org/docs/WEF_Harvard_HE_GlobalEconomicBurdenNonCommunicable-Diseases_2011.pdf)

The high prevalence of CVDs in aging countries results in high healthcare costs and public health spending. For example, in Germany, the total healthcare costs for all CVDs in 2015 were more than €28.3 billion.<sup>10</sup> In France, the total healthcare costs for all CVDs in 2015 were nearly €15.2 billion.<sup>11</sup> In the United States, the medical costs of CVDs totaled \$318 billion in 2015, and these costs are projected to grow 135% by 2035.<sup>12</sup> These figures indicate the critical need to achieve healthier aging, which will reduce public health spending.

For example, research from the American Heart Association shows that CVD prevention measures can save costs by ensuring healthy aging at every stage of life. In particular, the research finds that community programs to address factors like exercise, nutrition, and tobacco and alcohol use can deliver a return-on-investment of \$5.60 for every dollar spent over five years, and reducing sodium intake to 1,500 mg/day could deliver \$26.2 billion in annual healthcare savings in the U.S.<sup>13</sup> These figures show the importance of focusing on heart health to promote healthy aging and reduce overall costs.

PART 1

# The Case for Cardiovascular Health: A Proxy for Healthy & Active Aging

## The Global Impact of CVDs

With over 17 million deaths worldwide, CVDs are the largest noncommunicable disease (NCD) by morbidity and mortality.<sup>14</sup> CVDs comprise a variety of disorders of the heart and blood vessels, including venous and arterial thromboembolism (VAT), coronary artery disease (CAD), heart failure (HF), and peripheral artery disease (PAD). From 1990 to 2016, the number of global, annual CVD deaths increased by more than 40%—from around 12 million to over 17 million—increasing CVDs' share of total mortality from 27% to 32% of all deaths.<sup>15</sup> It is, however, the health systems' focus on mortality rather than the impact of living with CVDs that hides their more profound effects.

For those living with CVDs, quality of life can be greatly impacted. And, along with these declines come staggering economic costs, even beyond the direct healthcare costs. When inadequately diagnosed and treated, these diseases often cause both those affected and their caregivers to miss work (e.g., absenteeism) or drop out of the workforce altogether (e.g., early retirement)—draining both productivity and economic output. The World Economic Forum (WEF) projects that CVDs will cause \$15.6 trillion in total lost economic output globally between 2011 and 2030.<sup>16</sup>

## The Critical Connection Between Aging and CVDs

Even with significant advances in cardiovascular health prevention, treatment, and care over the past century, global population aging has brought increased prevalence of CVDs.

Just as aging is a key risk factor for CVDs, so too are obesity, diabetes, genetic preconditions, and other conditions closely related to lifestyle decisions, and many of these risk factors have risen steadily over the past several decades. Global prevalence of diabetes increased from less than 5% of the global adult population to more than 8% between 1980 and 2014, and worldwide obesity has nearly tripled since 1975.<sup>17,18</sup> Further, as a key obesity indicator, the World Health Organization (WHO) estimates that approximately 23% of adults and 81% of adolescents are not sufficiently active.<sup>19</sup>

Acute CVD events, such as stroke, are also linked to cognitive impairment, mobility limitations, and falls. For example, one-third of all cases of dementia are attributed to vascular factors, and 25–30% of ischemic stroke survivors develop vascular cognitive impairment or vascular dementia.<sup>20,21</sup> Additionally, CVDs are linked to mobility challenges: 40% of stroke survivors suffer a serious fall within a year of their stroke.<sup>22</sup>



CVDs generate an immense, multi-dimensional burden for individuals, families, communities, societies, and economies worldwide, which is on pace to increase dramatically as populations age. Yet too often, these diseases are misunderstood as a natural condition of becoming old when in fact proactive attention to prevention, treatments, and care can change the incidence and prevalence of these conditions regardless of age. When older adults accept CVDs as simply a result of old age, this evokes a sense of fatalism and helplessness that is also reflected as an ageist attitude in society. Too often, and in most cultures around the world, older people are marginalized as inactive, unproductive, disabled, and dependent.

Yet, innovations in medicine, technology, and caregiving prove that a CVD diagnosis does not have to be a death sentence. Further, the advent of longer lives tells us that innovation must continue.



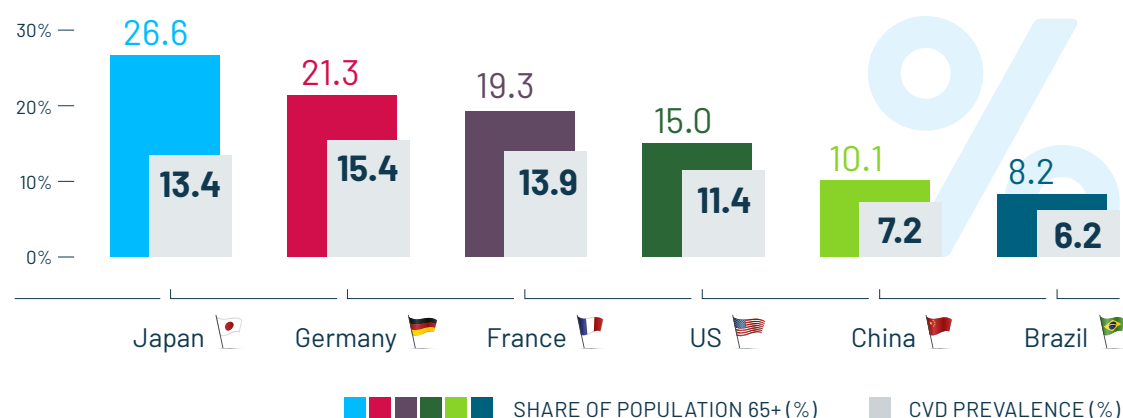
**Ageist attitudes wrongly equate getting old with getting sick, being unhealthy, and low or no contributions to society, and those attitudes can be a self-fulfilling prophecy.”**

– Michael W. Hodin, PhD, CEO, Global Coalition on Aging

## **Aging and the CVD Burden: Six National Examples**

In different countries, population aging and the related challenges of CVDs are in different stages and playing out at different speeds. For example, when considering the connection between aging and CVDs in Brazil, China, France, Germany, Japan, and the United States, we find that in each country, the stage of population aging is connected directly to the prevalence rates of CVDs, though additional factors also play a role. The three oldest countries (those with the highest proportions of older people compared to young)—Japan, Germany, and France—also had the highest rates of CVDs in 2016: over 13%.<sup>23</sup> The United States falls in the middle with a CVD prevalence rate of roughly 11%.<sup>24</sup> Finally, the youngest countries—China and Brazil—had lower CVD rates: less than 8% of the total population.<sup>25</sup>

## Ageing Populations and CVD Prevalence Around the World, 2016



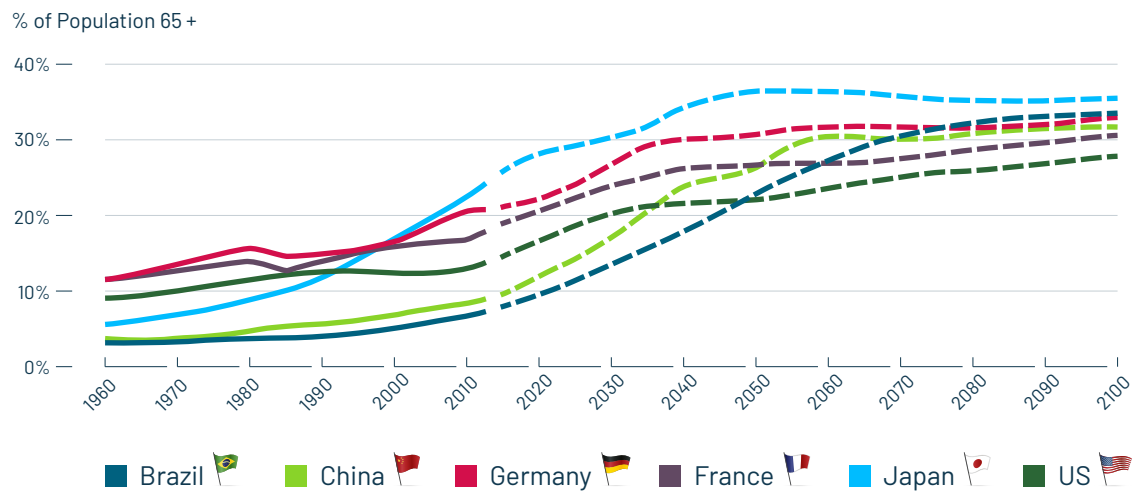
Source: World Bank DataBank: Population ages 65 and above (% of total), Selected countries, 2016, <https://data.worldbank.org/indicator/SP.POP.65UP.TO.ZS?locations=BR-CN-FR-DE-JP-US>

Global Health Data Exchange GBD Results Tools: Prevalence, Cardiovascular diseases, Selected countries, 2016, <http://ghdx.healthdata.org/gbd-results-tool?params=gbd-api-2016-permalink/1ac3b9c7cb437acc2719c84c65ad7c4d>

Looking ahead, population aging will accelerate in these countries, which threatens to increase the burden of CVDs. By 2050, adults 65+ will account for more than 35% of Japan's population, more than 30% of Germany's population, and more than 25% of France's population.<sup>26</sup> These "super-aged" societies—countries with 20% or more of their populations over 65—will soon be joined by China and Brazil, characterized by dramatic demographic spikes in aging. China's older population will skyrocket through mid-century, surpassing the United States and France with more than 30% of its population over the age of 65 by 2060.<sup>27</sup> Brazil will follow a similar trajectory, becoming "super-aged" by 2045.<sup>28</sup>

This population aging trend is already triggering an explosion in CVD prevalence, costs, morbidity, and mortality across OECD countries, and in developing countries including China and Brazil. These same dynamics are impacting countries around the world, particularly those where population aging is most rapid. We must ensure that aging does not lead to an unsustainable surge in CVDs; the consequence would strain already strapped public health systems, possibly social security, and constrain resource allocation in other needed areas.

## Growth in Population Aging (1960-2100)



Source: World Bank DataBank: Population ages 65 and above (% of total), Selected countries, 1960-2015, <https://data.worldbank.org/indicator/SP.POP.65UP.TO.ZS?locations=BR-CN-FR-DE-JP-US>

United Nations Population Division, "Population age 65 and above," (2017) <https://population.un.org/wpp/Download/Probabilistic/Population/>

Efforts to address CVDs, with an eye toward health and cost improvements for our aging society, will have profound impact on overall outcomes. As such, CVDs are the ideal starting point for major investments in the pursuit of healthier aging. Policy-makers can proactively address the mounting burden of CVDs with responses that build on the innovations in CVD prevention, treatment, and care of the past 50 years. These innovations have improved the global age-standardized death rate of CVDs by 22% since 1990.<sup>29</sup> This is progress, but we must reframe the ultimate goal to be not only about longer lives—20th century modernization has already achieved that—but about longer *and healthier* lives.

PART 2

# Aging Builds Momentum for Global Health Policy Action on CVDs

## 21st Century Global Health Policy for Aging and NCDs

Medical and scientific advances leading to longer lives have enabled the aging trend, but this new longevity also presents profound health challenges. More people are living for longer than ever before, and this vastly increases the social, economic, and medical burden of age-related, chronic conditions. NCDs, such as CVDs, cancer, diabetes, respiratory diseases, and Alzheimer's, take an incredible toll on the individuals living with them and their families. And, these growing burdens on patients lead to mounting health challenges with far-reaching implications for societies, economies, and health systems.

NCDs are responsible for roughly 41 million deaths each year, or more than 70% of all deaths globally.<sup>30</sup> The World Health Organization (WHO) projects that this number will rise by 27% to 52 million by 2030.<sup>31</sup> Given these trends, long-held assumptions about aging, health, and the course of human life are no longer sustainable. Simply put, the global community cannot afford to continue equating old age with poor health. For centuries, healthcare systems have treated illnesses reactively, relying on acute care in response to medical crises. But when adults routinely live into their 80s and beyond, often with multiple chronic conditions, this approach is neither individually desirable for patients nor economically feasible for governments and societies.

Instead, the global community must pivot to proactively address, mitigate, and prevent age-related health challenges by promoting healthy, active aging and developing innovative solutions.



**As the prevalence of chronic diseases continues to rise with the aging of the global population, leaders must collectively work toward policies and practices that advance healthy aging. At the center must be the focus on maintaining our functional ability to do the things we value—at each stage of the life course.”**

— Dr. John Beard, Former Director, Ageing and Life Course, World Health Organization

## Policy Momentum on Aging

In recent years, leading global, multilateral, and national institutions and health policy decision-makers—including the WHO, OECD, G20, governments, and others—have recognized the need to address the growing health and economic challenges related to

population aging. They have established landmark public policy responses, resulting in global policy momentum on population aging. Now, policy-makers must continue this momentum to establish frameworks, programs, and collaborations that realize a sustainable course for healthy and active aging and overturn long-held, outdated assumptions equating old age with poor health.

Governments and global organizations can drive a robust, coordinated response to the health challenges of aging, building on the progress achieved over the last decade.

## Examples of Global Momentum and Policy Action on Aging and CVDs

In particular, the WHO has taken multiple actions to address aging in recent years. In 2016, it published the *Global Strategy and Action Plan on Ageing and Health (2016-2020)*.<sup>32</sup> This plan established a framework to build the evidence and partnerships needed to support the WHO's *Decade of Healthy Ageing* from 2020 to 2030.

The WHO also included specific references to aging and NCDs in its five-year strategic plan for 2019-2023, which states: "The Secretariat will support Member States to promote healthy ageing [...] These actions include aligning health systems to the needs of older populations, with a special focus on enhancing the functioning of older persons and the management of chronic disease..."<sup>33</sup>

Also at the international level, the Organization for Economic Co-Operation and Development (OECD) has released *Cardiovascular Disease and Diabetes: Policies for Better Health and Quality of Care*, which reviews the most effective policies for nations to address CVDs.<sup>34</sup>

Further, regional and multilateral organizations have also highlighted the growing importance of responding to population aging. In 2015, the G20 published the *G20 Principles on Silver Economy and Active Ageing*, which established policy recommendations to guide strong growth informed by population aging.<sup>35</sup> In Europe, the European Union included demographic aging in its growth strategy, *Europe 2020: A European strategy for smart, sustainable and inclusive growth*, calling for member states to address aging as a key economic factor.<sup>36</sup>

National policy-makers have also launched responses to population aging. For example, in Europe, the French government has introduced a national plan that includes specific mechanisms “to promote healthy aging among people aged 55-75.”<sup>37</sup> To address long-term care needs for its aging population, the Japanese government introduced a long-term care insurance system in 2000, and it amended this system to support integrated community care in 2012.<sup>38</sup>



These recent global developments illustrate the growing momentum and clear imperative for policy actions to address health and economic challenges in the context of population aging—and cardiovascular health in the aging context. Together, policy organizations can launch multifaceted, coordinated responses that mitigate the negative impacts of population aging today and provide a foundation for future success.

Of critical importance for CVD advocates is that the WHO is also forcing a new way of thinking about measuring and judging success—maintaining the “functional ability” to do the things important to individuals, as opposed to the 20th century communicable disease model that targets “absence of disease.”<sup>39</sup>

## PART 3

# Investments in Cardiovascular Health Are Investments in Our Future



The rise in cardiovascular disease—the world’s number one cause of death—should serve as a major call to action for policy-makers, the health sector, patient advocates, and the public. Innovations in healthcare, medicine, and technology have brought us longer lives, but the next era of innovations in prevention, science, and healthcare delivery is now needed to combat this epidemic and elevate heart health as a driver of longer—and healthier—lives.”

- Dr. Holly S. Andersen, MD, Director of Education and Outreach, Ronald O. Perelman Heart Institute and Attending Cardiologist and Associate Professor of Clinical Medicine, New York Presbyterian Hospital—Weill Cornell Medical Center and Scientific Advisor, Women’s Heart Alliance



## Taking Action Today

Currently, policy organizations and other key stakeholders have the opportunity to seize on a full range of possibilities to address CVDs in the context of aging populations. Global and national policy stakeholders should address a new imperative: immediately invest in CVD innovation to save lives, control costs for healthcare sustainability, and create a new model for healthy aging.

Mitigating and reducing these impacts will require addressing three broad areas of need: **awareness, innovation, and collaboration**. Though there has been important progress in these areas, more needs to be done to prepare for the consequences of population aging. We will be measuring progress across several key milestones in the context of the global health and aging conversation and believe these will be markers of success along the way:

**/ A Central Part of the Decade of Healthy Ageing:** The WHO *Ageing and Health Strategy* provides guidance for all government decision-makers regarding public and private spending on continued innovation, regulatory reforms aligned to approval for innovations, and the alignment of regulation and investments tied to ongoing innovation. While CVDs are recognized as a critical lever for action in the strategy, CVD outcomes must be called out as an explicit metric for the upcoming *Decade of Healthy Ageing* and the new global public health paradigm defined by WHO as “functional ability as we age.”<sup>40</sup> According to the WHO, this is a concept that refers to “the perspective of the functional ability that enables older people to be, and to do, what they have reason to value.”

**/ Our Reframed Aging Ecosystem:** Health in the context of aging demands a new view of the ecosystem across and among innovative medicine, technology, and elder caregiving. Public policy can and should enable all parties in this ecosystem to connect and engage to ensure better monitoring of CVDs as we age and earlier detection and diagnosis, which will in turn lead to better outcomes for patients, health systems, and the economy.

**/ A Lever to Lead a Cultural Shift:** Today we are beginning to see a cultural and societal shift in our view of aging—from a 20th century perspective of aging as a transition into disability and dependence to a 21st century view that does not stereotype but recognizes healthy and active lives at any age. Recognizing that a decline in cardiovascular health is not directly correlated to aging will help spur innovation and new discovery.

# I. Key Actions to Increase Awareness of CVD Risk and Opportunities for Action

NCDs, including CVDs, are connected to risk factors embedded in individuals' everyday lives and daily decision-making. This is both a challenge and an opportunity. Meaningful policy action on CVDs must promote awareness and education amongst the public, patients, caregivers, and healthcare professionals, empowering people to reduce risk for CVDs and related health challenges. Policy actions can also build awareness of the important role of caregivers and the challenges they face.

## THE ACTIONS NEEDED TO DRIVE AWARENESS ARE:

**1. Encourage health and prevention aligned with WHO's new *Ageing and Health Global Strategy and Action Plan***—Policies must improve the education and awareness of the broader public about the demographic shift to aging and its implications, with the goal of preventing chronic diseases, and enabling healthy lifestyles and communities. This approach will encourage individuals to make daily improvements to their behaviors and decision-making, mitigating CVD risk and making progress toward improving functional ability later in life.

## TO ACHIEVE THIS, POLICY-MAKERS SHOULD:

**/ Design public-facing campaigns focused on CVDs, their connection to aging, the related need for healthy lifestyles, and the role of caregivers.** There should also be content with younger generations in focus. It is critical to educate the public about the everyday decisions that individuals can make to help prevent CVDs, including in connection with campaigns for other conditions that focus on shared risk factors.

**/ Establish cardiovascular health goals centered on functional ability for older populations and make these a key component of health policy.** This will address the new health challenges of the 21st century, focusing on prevention.

**2. Empower patients and caregivers through education of the changing social and cultural dynamics of an aging society.** Policies must empower patients and caregivers with information to achieve the best possible treatment outcomes and patient safety. Effective policies will engage a broad set of stakeholder groups to improve medication adherence, ensure effective communication with healthcare providers, combat ageism, and provide a framework for proactive healthy aging (e.g., smoking cessation, physical exercise regimens, etc.).

**TO ACHIEVE THIS, POLICY-MAKERS SHOULD:**

**/ Engage patients, caregivers, and healthcare providers to increase rates of CVD medication adherence.** Effective treatments for CVDs are available and accessible by patients, but low adherence dilutes the effectiveness of treatments, which may lead to hospitalizations, and thus additional economic strain on health systems. Better communication that empowers patients is needed to help them take control of their cardiovascular health in a proactive way.

**/ Establish best practices that encourage communication between and among healthcare providers, patients, and caregivers on CVD prevention and treatment.** These practices can empower our growing aging population by increasing awareness that CVDs do not have to be a normal part of aging.

**/ Include broad stakeholder input from patient advocates and elder caregivers in the global public health environment focused on aging.** Integrating this input into WHO's *Global Strategy and Action Plan* will inform policies that accurately reflect the priorities, needs, and preferences of those directly affected by CVDs.

## II. Key Actions for Driving Innovation in CVD Prevention, Treatment, and Care

Important breakthroughs in CVD prevention, treatment, and care have emerged in the past five decades, but the pace of population aging demands that policy-makers take action to further accelerate innovation. Policy-makers must recognize that innovation moves forward over time primarily through incremental advances, so we must accept a research paradigm aligned to this stepwise progression. Research toward treatments for unique sub-populations, like older adults, is the engine that spurs pharmaceutical innovation. It must be supported by investments focused on the goal, realizing cost savings and improving health outcomes in the long run.

### THE ACTIONS NEEDED TO DRIVE INNOVATION ARE:

**1. Invest in sustainable health solutions**—Policy discussions must shift to recognize that spending on CVD innovation is an investment in keeping patients as healthy as possible for as long as possible, rather than a sunk cost. Transformative medicines, digital health technologies, nutritional solutions, preventive and value-based care models, and elder care in the CVD space are the only ways to mitigate the immense direct and indirect costs of these diseases and their comorbidities in the long term. For example, innovative medicines can put healthcare systems on a more sustainable path by reducing inefficiencies and costs in other parts of the healthcare system such as hospitalizations, physician visits, transplants, or other expensive procedures and surgeries—all while improving the lives of individuals.

### TO ACHIEVE THIS, POLICY-MAKERS SHOULD:

**/ Establish policies that ensure investments in incremental innovation, which will be transformative.** With well-designed incentives, steady progress against CVDs and comorbidities will provide the baseline insights and knowledge necessary for breakthroughs.

**/ Enable innovative and quality care in the home by promoting the geriatrics field and caregiving as a fulfilling and noble career.** Home is the preferred setting for older adults as they age, and at the same time, health systems can benefit from the widespread adoption of

in-home care services to better monitor CVDs and comorbidities, improve medication adherence, and avoid hospital visits and stays.

**/ Create payment models based on the total value of an innovation for health systems, societies, and economies, instead of its immediate “sticker price.”**

Governments recognizing the importance of this differentiation should move away from external reference pricing and facilitate flexible, country-specific pricing arrangements such as indication-and-outcomes-based pricing agreements for innovative medicines. Over time, this approach will generate savings and deliver sustainable levels of spending.

**/ Involve patients and physicians in the development of value assessment frameworks and decision-making processes.**

A holistic and patient-centered understanding of the value of innovative medicines requires health systems to make the patient’s experience and patient-reported outcomes a central aspect of defining value. In this process, policy-makers must also address the technical, financial, structural, and political barriers towards value-driven healthcare systems.

**/ Create and foster health-promoting environments that support healthier lifestyles and prevention, such as age-friendly, walkable cities.**

This approach ensures that people can take control of their own health and stay active as they age, with support for their mobility and independence.

**2. Reframe regulation**—Reframe and reimagine regulatory regimes to enable ongoing innovation and therefore align with goals for healthier, active aging. Well-designed regulatory frameworks can serve as a catalyst and enabler of new, more effective treatments and technologies.

**TO ACHIEVE THIS, POLICY-MAKERS SHOULD:**

**/ Reduce the time to market by enabling better approaches in the post-marketing surveillance period.** Specific policies and schemes that ensure rapid market access to breakthrough treatments will speed up the time it takes for patients to benefit from ground-breaking innovations.

**/ Safeguard intellectual property (IP) protections to enable ongoing research to tackle some of the most pressing CVD challenges as we age.** Strong IP protections are the lifeblood of the research-based pharmaceutical industry. Without these, innovative companies

will not be able to embark upon the uncertain and expensive investments required for the development of innovative medicines. IP mechanisms such as data exclusivity or patent linkage help to establish legal certainty for innovators to sustain their R&D efforts, preparing

for low-cost generics to enter the market at a later date. Governments should therefore take a long-term approach to understanding the value of innovative medicines—not a siloed and short-term budget impact analysis.

**3. Leverage digital technology**—Policies must drive forward digital innovation and strengthen incentives for new health technologies, as well as coordination within care teams to provide care more efficiently. Digital technologies are emerging as a 21st century standard of care, but they have not yet been fully utilized in the health and CVD space to reduce costs and improve quality of life.

**TO ACHIEVE THIS, POLICY-MAKERS SHOULD:**

**/ Create frameworks that appropriately value and incentivize scalable and proof-tested digital health technologies in the CVD space.** For instance, reimbursement systems that recognize remote care tools as proper substitutes for face-to-face medical care will help attract the investment needed to develop and deploy leading-edge health technologies for CVDs, comorbidities, and related health challenges.

**/ Make remote care a standard of care.** This will ensure connected care teams can effectively monitor CVDs and comorbidities, relieve burdens on health systems, and therefore become integrated as a core component of 21st century care delivery. Widespread use of preventive monitoring offered through remote care will ensure better adherence, treatment outcomes, and quality of life, which policies can then help to scale and lead to continuous improvement.

## III. Key Actions for Enabling Collaboration Toward Improved Cardiovascular Health

CVDs impact not just patients, caregivers, and health systems—but also economies, employers, and societies. These impacts are represented by indirect costs, such as lost economic productivity and informal caregiving. Effectively addressing the direct and indirect costs of CVDs will require policies and platforms that engage a wide range of organizations, including government agencies, health systems, the private sector, non-profits, global organizations, advocacy groups, and others. Each of these stakeholders is impacted by CVDs, and each holds unique insights and capabilities that can help to solve this challenge. The most effective platforms for collaboration will join organizations from different sectors and countries to collect and analyze data, share knowledge, develop new strategies, and implement these strategies.

### THE ACTIONS NEEDED TO DRIVE COLLABORATION ARE:

**1. Champion creative partnerships**—Policy-makers must recognize that cardiovascular health has multiple frames for multiple conditions at various stages, and across all age groups. This diversity, combined with the widespread impact of CVDs, demands innovative partnerships that deliver the collaboration, knowledge-sharing, and focused resources necessary to solve key CVD challenges.

### TO ACHIEVE THIS, POLICY-MAKERS SHOULD:

**/ Support public-private partnerships (PPP) to fund and conduct research on CVD treatment and care, as well as implement CVD best practices.** Such partnerships will combine the resources, expertise, and talent of leading companies and government agencies to push towards new treatments, care models, and approaches to prevention.

**/ Engage employers to launch health programs targeting cardiovascular health for their employees.** Employers can serve as hubs for health information on NCD and CVD prevention, particularly if they are members of public-private coalitions focused on this area.

**2. Create global and national platforms for collaboration**—Policies must shape existing and new platforms for multi-stakeholder collaboration on CVDs at the national and global levels. Such platforms will bridge national boundaries, disciplines, and sectors to catalyze sustainable CVD responses.

**TO ACHIEVE THIS, POLICY-MAKERS SHOULD:**

**/ Build a coalition to engage a broad range of stakeholders, nationally and globally, to collect data on CVDs, share surveillance information, monitor progress, and implement solutions.** By quantifying and analyzing CVD impacts and responses, this will stimulate productive dialogues and forge the consensus needed to guide simultaneous, coordinated efforts.

**/ Leverage the efforts of existing global organizations and platforms on the challenges and opportunities of CVDs in the context of healthy aging, to encourage prevention, innovation, and better care.** In particular, the WHO, G7, OECD, World Economic Forum, and others can serve as key forums to galvanize global

action on CVDs. There is also a need for new, web-based, accessible global platforms to share knowledge and spread CVD best practices between countries.

**/ Create open-source and collaborative data platforms that utilize new innovations to improve upon the 20th century clinical trial model.** In particular, such an approach could tap the vast amounts of digital health data and technologies now available.



# Conclusion



Over the past decades, innovative treatments have contributed to an increase of the average life span. As we continue to see rapidly aging populations around the world, effectively tackling and managing age-related illnesses have become pivotal. We have to focus on addressing these unmet medical needs by embracing the opportunities around scientific progress and innovation. Coupled with these efforts in health care, collaboration within society will be equally important to establish a holistic and sustainable framework for the future.”

– Dr. Michael Devoy, Chief Medical Officer of Bayer AG

Taking action on CVDs is a new imperative for policy-makers at every level. As societies age, accelerating, strengthening, and scaling CVD responses are essential to prevent these health and economic impacts from reaching unsustainable levels. All 194 governments will be directed by the new *WHO Ageing and Health Strategy* and have committed to taking part in the *Decade of Healthy Ageing*. Policies that stimulate and guide widespread awareness, robust innovation, and multi-stakeholder collaboration can achieve the CVD advances that our global public health leaders have set forth and, more importantly, patients across the world need—establishing a new model and setting the pace for healthy, active aging in the 21st century.

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