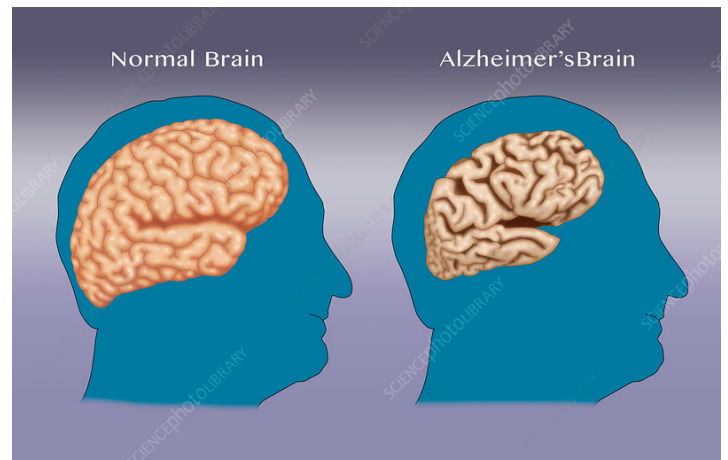


FORUM:	World Health Assembly
ISSUE:	Measures to Address the Rising Burden of Alzheimer's Disease in Countries with Increasing Aging Populations
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Introduction

Dementia, a syndrome associated with many neurodegenerative diseases, is characterized by a significant decline in cognitive abilities. Alzheimer's disease (AD) is the most common cause of dementia. According to the WHO, AD accounts for 60-70% of dementia cases worldwide and is a gradual and progressive neurodegenerative disorder. As the global population increases, the prevalence of Alzheimer's disease is rising rapidly.

The prevalence of AD has emerged as a significant concern in the global landscape characterized by an aging population. The aging population has led to heightened vulnerability. The World Health Organization (WHO) estimates that over 55 million people currently live with dementia, a number projected to triple by 2050, reaching 152 million cases, with the most significant growth occurring in low- and middle-income countries (LMICs). This demographic shift has made AD a critical public health challenge, straining healthcare systems, economies, and families. Given the range of the population affected directly or indirectly by dementia and the complexity of this condition, dementia requires a whole-of-government, broad, multistakeholder, public health approach. Older adults are at heightened risk, with aging populations in nations like Japan, Italy, and the U.S. facing a surge in dementia-related costs and caregiving demands due to AD, posing significant concerns. Without urgent intervention, the social and economic burden will escalate, underscoring the need for global cooperation in research, early diagnosis, and care strategies. Given these challenges, AD is not only a medical issue but also a socioeconomic global concern.



Comparison of normal and Alzheimer's brain



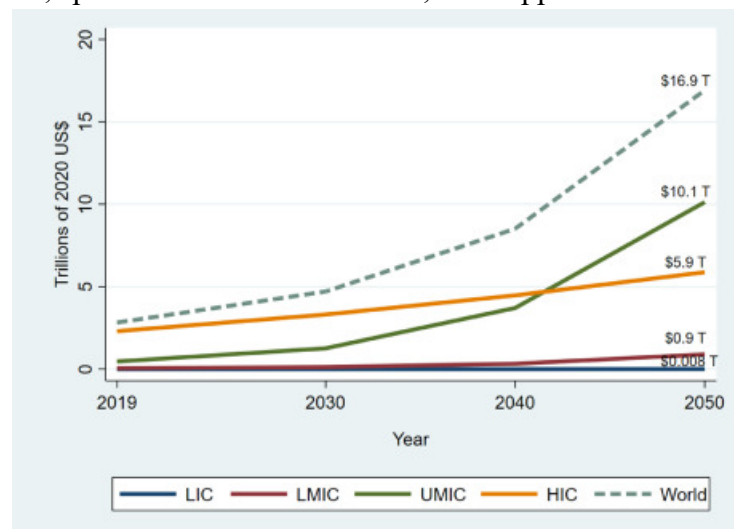
Background

Due to the lack of a definitive cure, Alzheimer disease (AD) presents a complex challenge requiring medical, social, and policy interventions. AD accounts for 60-70% of all dementia cases. The disease is characterized pathologically by the accumulation of abnormal neuritic plaques and neurofibrillary tangles in the brain, resulting in neuronal damage and cognitive decline. AD primarily affects individuals over 65, though early-onset cases do occur. Risk factors include age, genetics, cardiovascular disease, and lifestyle factors such as smoking and physical inactivity. According to the WHO, the economic impact is continuously staggering, with global dementia-related costs estimated at \$1.3 trillion annually, a figure expected to rise sharply by 2030. Countries with rapidly aging populations, such as Japan, Germany, Italy, and the United States, face mounting pressures due to increasing dementia cases. European nations and China are experiencing a surge in dementia-related healthcare costs and caregiving burdens. In Japan, nearly 30% of the population is over 65, and dementia is now a leading public health concern.

Problems Raised

Rising Healthcare Costs and Economic Burden

The financial burden of Alzheimer's disease on healthcare systems is staggering. As the disease progresses, patients increasingly depend on long-term care, specialized medical services, and support for daily living. The indirect costs such as lost productivity among caregivers and early retirement of affected individuals further exacerbate economic challenges. Many families face financial hardship due to out-of-pocket expenses for caregiving. Without intervention, these costs will become unsustainable for both governments and individuals. In the United States, the average annual cost of caring for someone with Alzheimer's is estimated at \$42,000 per patient and over \$100,000 for nursing home facilities.



Estimated economic burden of ADRDs by country groups through 2050

Lack of Effective Treatments and Early Diagnosis

Despite decades of research, there is no cure for Alzheimer's, and existing treatments only temporarily alleviate symptoms. Recent drugs like Kisunla and Leqembi have shown modest success in slowing cognitive decline but remain controversial due to high costs and limited accessibility. Late diagnosis remains a major barrier. Many patients are diagnosed only after significant cognitive decline,



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reducing the effectiveness of interventions. Public awareness of early symptoms such as memory lapses and confusion is low; healthcare systems in developing nations often lack diagnostic infrastructure. Early detection is critical for managing symptoms and planning care, yet it remains underprioritized in many regions.

International Actions

National Alzheimer's Project Act (NAPA)

In 2010, the Alzheimer's Association and the Alzheimer's Impact Movement, a separately incorporated advocacy affiliate, worked with Congress to develop the National Alzheimer's Project Act (NAPA). Signed into law in 2011, NAPA led to the creation of a national strategic plan to address the rapidly escalating Alzheimer's crisis due to an aging population and fundamentally change the way the nation addresses Alzheimer's and all other dementia. It accelerated research, enhanced care, and reduced risk factors



Global Action Plan on Dementia from WHO (2017-2025)

The World Health Organization (WHO) launched a global action plan on not only Alzheimer's disease but also general dementia. The plan addressed AD as a public health priority. The plan presents the problems, such as misleading information and wrong set programs. The plan fosters improving diagnosis and treatment access, particularly in Less Economically Developed Countries (LEDCs). By addressing the issue, it boosted research for better treatments and prevention strategies. The plan also prioritizes caregiver support through training programs and mental health resources, recognizing its critical role in dementia care. It encourages member states to develop national dementia policies, with over 35 countries having already adopted tailored strategies since its launch.

Key Players

Germany

According to a 2023 OECD study on dementia in Germany, the country has established itself as a European leader in developing systemic responses to Alzheimer's disease, with dementia-related costs exceeding €50 billion annually. Germany's National Dementia Strategy represents one of the most comprehensive policy frameworks, integrating healthcare, social services, and scientific research. The strategy is designed as a long-term process that allows for consideration of changing priorities and

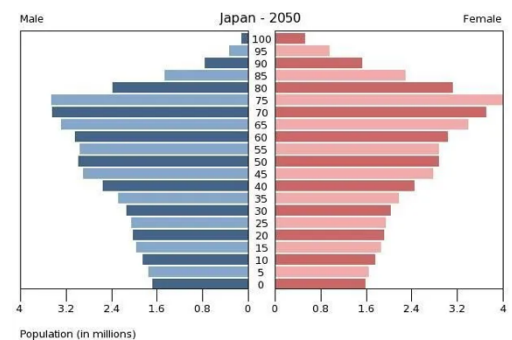


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challenges and their impact on the lives of people with dementia and their caregivers. Germany faces an acute caregiver shortage; according to Compliance Solutions & Providers (CSP), it is projected to reach 300,000 by 2030, prompting investments in specialized training programs and support for family caregivers. As Europe's largest economy with a rapidly aging population, Germany has a balanced focus on medical innovation, social welfare systems, and caregiver support, offering valuable lessons for developed nations combating the Alzheimer's epidemic.

Japan

According to the WHO Dementia Policy Case Study in 2020, Japan has emerged as a global leader in addressing Alzheimer's disease; it faces the world's most severe aging crisis with over 30% of its population aged 65 or older. The country's dementia care system is undergoing transformation through its pioneering Orange Plan, which emphasizes early detection through community screening programs and the development of dementia-friendly communities. Japan is investing heavily in technological solutions, including caregiver robots and AI-powered monitoring systems, to overcome its shrinking workforce. The government has implemented mandatory dementia training for all healthcare workers and created innovative community support networks. With dementia now affecting nearly 1 in 5 elderly Japanese, the country's comprehensive approach – combining policy innovation, technological advancement, and community engagement – serves as a crucial model for nations facing similar demographic challenges. Japan's experience highlights both the urgent need for action and potential solutions in super-aged societies.



Japan's population distribution by age in 2050

Possible Solutions

Expanding Early Detection and Public Health Initiatives

Early diagnosis of Alzheimer's is critical for slowing disease progression, yet many healthcare systems lack structured screening programs. Governments should implement nationwide cognitive assessment programs integrated into routine geriatric care, particularly in countries with aging populations. If the government is not able to afford the cognitive assessment implementation due to a lack of financial resources, the government should request financial support from various organizations. Public awareness campaigns must be prioritized to encourage early medical consultation. Mobile health technologies, including AI-driven apps that track cognitive changes, could further enhance early detection, especially in rural or underserved areas where access to specialists is limited. Research shows



that managing hypertension, diabetes, and obesity, along with encouraging physical activity, cognitive training, and social engagement, can delay or prevent up to 40% of dementia cases according to Lancet. Thus, risk-reduction strategies should also be promoted at the population level. National health policies should incorporate these preventive measures into public health guidelines

Strengthening Global Research Collaboration

To effectively combat Alzheimer's disease, a comprehensive research strategy should be implemented. It may deepen our understanding of disease mechanisms, including the role of amyloid plaques, genetic risk factors, and the impact of inflammation and vascular health. For instance, the Amyloid Plaque Research from The Dominantly Inherited Alzheimer Network (DIAN) is an international study of families with genetic mutations causing early-onset AD. Additionally, clinical innovations are urgently needed to overcome current limitations, particularly through government-collaborated development of more accurate biomarkers for early diagnosis, standardized international trial protocols, adaptive study designs to accelerate testing, and improved participant diversity to ensure treatments work across all populations. Crucially, research must prioritize affordable, scalable treatments accessible to low- and middle-income countries, where Alzheimer's cases are rising fastest. To support these efforts, international research consortia should be established to facilitate data sharing.

Glossary

Neurodegenerative Disease

chronic conditions that damage and destroy parts of your nervous system over time, especially your brain

Neurofibrillary tangles

abnormal clumps of a protein called tau that accumulate inside neurons, disrupting their function and contributing to neurodegenerative diseases like Alzheimer's

Amyloid Plaques

Clusters of misfolded beta-amyloid proteins that accumulate between nerve cells in the brain, forming a key pathological marker of Alzheimer's disease and contributing to neurodegeneration.

Kisunla

A monoclonal antibody treatment for Alzheimer's disease, designed to slow cognitive decline by targeting amyloid plaques in the brain.

Leqembi



A monoclonal antibody treatment for Alzheimer’s disease that targets and eliminates amyloid-beta plaques in the brain.

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