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## Recommendations for China's Dementia Prevention and Control Action Task List: A WHO Global Action Perspective Postprint

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### Abstract

As a major public health issue, dementia has attracted widespread global attention. Early identification of high-risk populations for cognitive dysfunction and intervention targeting risk factors can help prevent the onset of dementia and delay its progression. The rapid increase in elderly dementia patients in China poses challenges to prevention and treatment systems, health promotion, social support, and research innovation. This article, in conjunction with the “Global Action Plan on the Public Health Response to Dementia 2017-2025” launched by WHO, from the perspective of WHO's global action and focusing on the current state of China's policies and practices, summarizes research progress in multiple aspects of dementia prevention and control, including social support, risk factor intervention, person-centered care, information system construction, innovative research, and technology translation, proposes a task list for China's “Dementia Prevention and Control Action Plan,” integrates China's current dementia prevention and control priorities with available resources, with the aim of providing reference for relevant dementia prevention and control decision-making and practical responses.

### Full Text

#### Preamble

#### List of Tasks for China's “Dementia Prevention and Control Action” from a WHO Global Action Perspective

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**Abstract** Dementia has emerged as a major global public health concern. Early identification of high-risk populations for cognitive impairment and targeted interventions against risk factors can help prevent dementia onset and delay its progression. The rapid increase in elderly dementia patients in China poses significant challenges to prevention systems, health promotion, social support, and research innovation. This paper integrates the WHO’ s *Global Action Plan on the Public Health Response to Dementia 2017-2025* with China’ s current policy and practice landscape, summarizing research progress across multiple domains including social support, risk factor intervention, person-centered care, information system development, and innovative research and technology translation. We propose a task list for China’ s “Dementia Prevention and Control Action Plan” that aligns current dementia prevention priorities with available resources, aiming to inform decision-making and practical responses in dementia prevention and control.

**[Keywords]** WHO Global Action Perspective; Dementia; Cognitive Impairment in Aging; Action Plan; Task List

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Dementia (also referred to as “chīdāi zhèng” or senile dementia) represents a major public health challenge worldwide. International experience demonstrates that early identification of high-risk populations for cognitive dysfunction and interventions targeting risk factors can prevent dementia onset, delay progression, and reduce disease and economic burdens on patients and families. In 2017, the World Health Organization (WHO) released the *Global Action Plan on the*

*Public Health Response to Dementia 2017-2025*<sup>1</sup> (hereinafter “WHO Plan” ), which systematically outlines priority action areas and proposes multi-stage, coordinated responses. The plan recommends integrating dementia initiatives with existing mental health policies, care models, and specific nursing services to avoid service fragmentation and enhance continuity in dementia prevention and treatment. The WHO Plan serves as a valuable reference for countries and regions preparing, launching, and implementing dementia prevention and control programs. To date, over 40 countries and regions have developed national dementia action strategies, achieving good progress in practice. From a WHO global action perspective, addressing the increasing global burden of dementia and fragmented prevention efforts requires developing a clear and implementable task list for China’ s “Dementia Prevention and Control Action Plan” as the foundation for preventing onset and delaying progression.

## 1. Dementia Epidemiology and China’ s Response

Dementia development follows a continuum, beginning with age-related cognitive decline (subjective cognitive decline, SCD), progressing to mild cognitive impairment (MCI), and advancing to dementia. Alzheimer’ s disease (AD) represents a primary form of dementia, with other subtypes including vascular dementia and Lewy body dementia<sup>2</sup>.

According to WHO’ s 2021 *Global Status Report on the Public Health Response to Dementia*<sup>3</sup>, over 55.2 million people worldwide lived with dementia in 2019. The Western Pacific region had the highest number of patients (20.1 million), followed by Europe (14.1 million), the Americas (10.3 million), Southeast Asia (6.5 million), the Eastern Mediterranean (2.3 million), and Africa (1.9 million). The global cost of dementia was approximately US\$1.3 trillion. Among those over 65, prevalence was about 8.1% for women and 5.4% for men. By 2030, the number of people with dementia is projected to reach 78 million, with global costs rising to US\$1.7 trillion.

In China, the number of patients is expected to reach 139 million by 2050. Dementia prevalence increases with age; among those over 90, prevalence is approximately 39% for women and 28.9% for men. Currently, China’ s dementia incidence among people aged 65 and above is 17.7-24.0 per 1,000 person-years<sup>4</sup>, while MCI incidence is 21.7 per 1,000 person-years<sup>5</sup>. The latest 2019 Global Burden of Disease study shows that from 1990 to 2016, China’ s age-standardized dementia prevalence increased by 5.6%, significantly higher than the global increase of 1.7%<sup>6</sup>. According to seventh national census data, China has entered a moderately aging society, with those aged 65 and above exceeding 14% of the population. Currently, consultation rates are only 14% for mild cases and 34% for severe cases, with 49% of cases mistaken for normal aging, indicating insufficient diagnostic timeliness. The rapid increase in elderly dementia patients creates enormous pressure on social ethics and family culture, while posing severe challenges to China’ s sustainable economic and social development.

To actively address disability and cognitive challenges from major age-related diseases, the *14th Five-Year Plan for National Aging Undertakings and Elderly Care Service System*<sup>7</sup> proposes encouraging early screening and health guidance for neurodegenerative diseases like Alzheimer's and Parkinson's, and implementing dementia prevention and psychological care actions. The *Healthy China Action (2019-2030)*<sup>8</sup> explicitly targets slowing the growth rate of dementia prevalence among those aged 65 and above. The National Health Commission's *Work Plan for Exploring Characteristic Dementia Prevention and Treatment Services*<sup>9</sup> emphasizes that public awareness of dementia prevention knowledge should reach 80%, and cognitive function screening rates for community/village elderly should reach 80%. According to the *Survey Report on the Living Conditions of Chinese Alzheimer's Disease Patients' Families (2019)* by the Alzheimer's Disease Branch of the China Association of Geriatric Health Care, 61.43% of patients hope for professional care services from institutions, 61.43% hope for psychological support for patients and families through formal channels, and 50.87% hope for more convenient diagnosis and treatment channels. Multiple stakeholders have called for a national strategy addressing dementia from multiple dimensions including early screening and diagnosis, treatment standards, drug development, and social security<sup>11</sup>.

As a developing country experiencing aging before becoming wealthy, China still faces unresolved questions about how to address the high costs of elderly care and medical treatment for dementia patients, and how to manage the human resources and facilities needed for long-term care. This paper examines the WHO Plan's action areas and content, proposing key elements and a task list for dementia prevention and control from a global action perspective, aiming to provide references for developing China's national dementia action plan.

## 2. Detailed Interpretation of the WHO Plan

In 2017, WHO launched the *Global Action Plan on the Public Health Response to Dementia 2017-2025*, which addresses diagnosis, treatment, care, and rehabilitation needs for people with dementia. The plan provides countries with a comprehensive, multi-domain blueprint for dementia prevention and control (see Table 1), encompassing seven major action areas: (1) Prioritize dementia as a public health priority; (2) Increase public awareness and foster dementia-friendly communities; (3) Intervene on key dementia risk factors; (4) Strengthen diagnosis, care, and social support capacity; (5) Support dementia caregivers and family members; (6) Develop dementia information systems; and (7) Advance dementia research and innovation.

**Table 1 WHO Global Action Plan for Public Health Response to Dementia 2017-2025**

Action Area Category	Key Components
<b>Prioritize dementia as a public health priority</b>	Comprehensive response from health, social care, and other government departments through multi-sectoral integrated pathways to coordinate policy implementation Identify and meet the complex needs of people with dementia and their caregivers within specific national contexts, engaging patients, caregivers, and other stakeholders
<b>Increase public awareness and foster dementia-friendly communities</b>	Enhance clinical understanding of different dementia subtypes and stages Reduce societal stigma and discrimination, ensuring rights of people with dementia are fully respected
<b>Intervene on key dementia risk factors</b>	Reduce exposure to modifiable risk factors and control key dementia risk factors Maximize public adoption of healthier behavioral choices
<b>Strengthen diagnosis, care, and social support capacity</b>	People with dementia need integrated, person-centered, accessible, and affordable health and social care, including screening, diagnosis, treatment, rehabilitation, and palliative care; other supports include mobility, nutrition, and creating pleasant environments Patients with advanced dementia need long-term care including health maintenance, social care services, palliative care, and dementia-friendly environment creation

Action Area Category	Key Components
<b>Support dementia caregivers and family members</b>	Caregivers are essential according to patient preferences and needs. Caring for dementia patients affects caregivers' physical, mental health, and social relationships; social policy should consider this and provide more empowerment.
<b>Develop dementia information systems</b>	Establish national-level dementia information integration platforms to incorporate key risk factor monitoring into health records. Conduct systematic monitoring and evaluation to provide best evidence for policy development and service improvement, enhancing accessibility and continuity of prevention, diagnosis, treatment, and care throughout cognitive decline.
<b>Advance dementia research and innovation</b>	Identify priority research areas to guide researchers and health workers. Simultaneously improve societal understanding of dementia prevention and control priorities.

Many countries and regions have subsequently released national or regional dementia action plans<sup>12</sup>. At the government level, many developed countries and regions with early aging populations have integrated dementia risk response into long-term development plans, establishing national strategic management leadership groups and legally protecting the rights of dementia patients and caregivers. At the societal level, they advocate for dementia-friendly communities, conduct community-based prevention and management, and create supportive social environments for better adaptation. At the healthcare institution level, they improve clinical standardization of diagnosis, treatment, care, and intervention, strengthen professional development training for caregivers, and enhance participation of primary healthcare workers. At the family level, they emphasize long-term family care for elderly dementia patients, providing economical and sustainable support to family caregivers to alleviate psychological pressure and help elderly patients receive respect and care. At the individual level, they promote healthy lifestyles for brain health, participation in meaningful daily

activities, and improved well-being and quality of life.

### 3. Key Elements and Task List for China's "Dementia National Action Plan"

The next 5-10 years represent a policy "window period" for China to actively respond to population aging. Clearly defining key elements of China's dementia response within the WHO Plan framework can inform the task list for China's Dementia National Action Plan. Building on WHO's global action progress and according to the *Opinions of the CPC Central Committee and State Council on Strengthening Aging Work in the New Era*<sup>13</sup>, dementia prevention and control should be a key focus of healthy aging in China. The task list should implement comprehensive measures based on principles of quality of life and dignity for older adults, focusing on key risk factor control and monitoring, social support, person-centered care, and innovative research and technology translation.

To optimize the dementia prevention and control system and enhance service capacity, we propose the following recommendations for developing China's Dementia Action Plan:

**Figure 1** [Figure 1: see original paper] China's "Dementia Action Plan" Checklist

#### 3.1 Multi-Stakeholder Collaboration in Dementia Prevention and Control

Dementia prevention and control must be prioritized within public health. Multiple stakeholders should be engaged, including government, public health and medical institutions, enterprises and universities, social organizations and industry groups, and families. Research consensus indicates that dementia prevention and control encompasses both a medical ecosystem (prevention, diagnosis, treatment, rehabilitation) and a social ecosystem (health education, family support, community care, financing). Government plays a crucial role in systemic reform by promoting health literacy, establishing early screening mechanisms, and standardizing diagnostic practices. Public health and medical institutions provide technical support for prevention, diagnosis, treatment, and rehabilitation. Enterprises and universities drive innovation in diagnostic technologies and drug development. Social organizations and industry groups offer unique advantages in building professional social work teams, developing appropriate care models, and advancing home-based care. Families can cultivate internal health capabilities and raise awareness. Given China's context, in the near term, public health and medical institutions should focus on dementia health education, risk factor intervention, and cognitive screening to seize the critical early intervention window. In the medium term, government should integrate existing medical and social resources, improve multi-sectoral capacity coordination, strengthen social support systems, and build more precise prevention and treatment pathways, while social organizations and industry groups can help dementia patients return to communities and families, creating age-friendly care

models that reduce social and family burdens. In the long term, enterprises and universities can continuously support technological, service model, and social support innovations.

### 3.2 Building a Dementia-Friendly Social Environment

Creating dementia-friendly environments requires positive media advocacy and improved population health literacy. Currently, dementia in China is characterized by low awareness, low consultation rates, low diagnosis rates, and high incidence. Many Chinese struggle to confront dementia in elderly family members, and stigmatizing terms like “chīdāi” (idiocy) contribute to shame and delayed diagnosis, hindering early detection and intervention. Moving forward, we should adopt more relaxed and trust-based approaches, using primary care institutions and family doctors to enhance community acceptance, create connections between dementia patients and external relationships, and provide emotional healing through communication. Through health institutions at all levels, family doctor contract teams<sup>14</sup>, and mass media, we should strengthen health education for all populations, emphasizing the necessity, feasibility, simplicity, and importance of early dementia screening to promote health literacy, healthy behaviors, and a supportive social atmosphere.

### 3.3 Intervention on Key Dementia Risk Factors

To date, both pharmacological and non-pharmacological treatments for dementia have limited effectiveness. However, recent epidemiological research suggests that interventions on key modifiable risk factors can significantly reduce dementia incidence and prevalence. Dementia is primarily caused by four biological processes: inflammation, lipid dysregulation, glucose dysregulation, and oxidation. Healthy lifestyles—including balanced diet, physical exercise, adequate sleep, stress reduction, and social participation—can substantially reduce dementia risk. Modifiable risk factors include smoking, physical inactivity, harmful alcohol use, and unhealthy diet; protective factors include formal education, physical activity, social connection opportunities, employment, and other cognitive stimulation. As detailed in the Lancet’s 2020 report on dementia prevention, intervention, and care<sup>15</sup>, these factors collectively account for 40% of dementia risk. Cultivating proactive healthy lifestyles and intervening on key risk factors to improve health compliance among high-risk populations represents a critical prevention priority.

### 3.4 Person-Centered Dementia Diagnosis, Treatment, and Care

Quality care can delay dementia progression and alleviate patient and family stress. Person-centered integrated service models should be gradually explored. Accurate diagnosis is the entry point for timely intervention, and evidence-based digital screening should be further developed<sup>16</sup>. Mature treatment and intervention systems are essential for following up screening results, with safe clinical pathways and patient-centered intervention methods being key priorities. In all

environments where dementia patients live, we must link families, communities, nursing homes, and hospitals to explore collaborative care models and appropriate assessment mechanisms for comprehensive elderly capacity and service needs. Against the backdrop of China's ongoing exploration of home-based medical care and family doctor contract services, we should strive to provide dementia patients with continuous health services covering prevention, diagnosis, treatment, and rehabilitation.

### **3.5 Establishing an Integrated Dementia Health Service System**

Services for elderly dementia patients cannot rely solely on the medical-elderly care system, nor can they depend entirely on families or social welfare institutions. Only by integrating medical-elderly care services, social services, and civil affairs support can we establish an effective dementia health service system<sup>17</sup>. First, government-led elderly dementia care institutions should be established, developing community-embedded elderly care stations and promoting integrated care and transitional care concepts. Second, we should simultaneously develop dementia-related service industries, encouraging enterprises, charities, foundations, and insurance institutions to invest in dementia services and provide personalized rehabilitation for patients at different stages. Only through both approaches can we achieve comprehensive care for dementia patients.

### **3.6 Digital Technology Empowerment for Risk Factor Monitoring and Intervention**

We recommend developing a national-level dementia health information system to promote continuous disease data collection. Precise phenotyping and prediction will facilitate more targeted primary and secondary prevention strategies, enabling continuous early detection, diagnosis, and treatment. The dementia health information system should collect data on dementia burden, risk factors, prevalence, and mortality, while optimizing continuous service processes and online-offline integration. Additionally, the system can dynamically manage key resources such as institutions and personnel, enabling visual tracking of progress on China's Dementia Action Plan task list.

### **3.7 Promoting Dementia Innovation Research and Technology Translation**

Current dementia drug research progresses slowly, with insufficient multidisciplinary collaboration and limited application of digital technology in whole-course management. Under the healthy aging framework, we should actively encourage innovative research and technology translation in cognitive health, invest in dementia research and innovation, and promote solid implementation of dementia prevention and control through technological, service, and collaborative strategy innovations. National research centers should unify enrollment criteria and research methods for multi-center, large-scale cohort studies to achieve leadership in key dementia research areas<sup>18</sup>. Simultaneously, we must build an

innovation system linking the innovation chain and industrial chain, with policy-industry synergy to accelerate translation of dementia research achievements into practical applications, providing guidance for more precise risk intervention, early diagnosis, and targeted treatment.

Against the backdrop of rapid population aging, dementia as a major public health issue demands greater attention. Implementing WHO's global dementia action in China requires precise adaptation. Facing the complexity of dementia in older populations and new technologies, advancing the key elements and task list of China's Dementia National Action Plan after fully understanding the needs of Chinese elderly populations holds important practical significance. First, public health and medical institutions must implement preventive measures and early identification of dementia with accurate and easy-to-use diagnostics, linking data through government information systems. The fundamental goal of screening and prevention is to enable person-centered diagnosis, treatment, care, and social support for early-stage dementia, allowing for health management and lifestyle interventions, which requires establishing safe and reliable health intervention pathways. Furthermore, government-designed integrated continuous dementia services will fill gaps in the service chain, while market-collaborated dementia care institutions will help address these shortcomings. In the long term, enterprises and universities should also implement dementia research translation and technological innovation to improve efficiency and precision in dementia response.

This proposed task list aims to identify critical dementia response elements from a WHO global action perspective, focusing on the "window period" for early action and aligning China's current dementia prevention priorities with available resources to inform decision-making and practical responses.

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**Conflict of Interest:** The authors declare no conflict of interest.

**References:** [1] Global action plan on the public health response to dementia 2017–2025. Geneva: World Health Organization; 2017.

[2] Tian JZ, Xie HG, Wang LN, et al. Chinese guidelines for the diagnosis and treatment of Alzheimer's disease dementia (2020 edition). *Chin J Geriatr.* 2021;40(03):269-283.

[3] Global status report on the public health response to dementia. Geneva: World Health Organization; 2021.

[4] Prince M, Acosta D, Ferri CP, et al. Dementia incidence and mortality in middle-income countries, and associations with indicators of cognitive reserve: a 10/66 Dementia Research Group population-based cohort study. *Lancet.* 2012;380(9836):50-58.

- [5] Zhuo CJ, Huang YQ, Liu ZR, et al. A five-year follow-up study of mild cognitive impairment incidence in two urban and rural communities in Beijing. *Chin Mental Health J.* 2012;26(10):754-760.
- [6] Jia JP, Li Y. Current status and future of dementia in China. *Chin J Neurol.* 2020;53(02):81-84.
- [7] State Council Notice on Issuing the 14th Five-Year Plan for National Aging Undertakings and Elderly Care Service System. *Gazette of the State Council of the People's Republic of China.* 2022;(07):13-29.
- [8] Li Keqiang's Government Work Report: Adhere to Prevention First and Deeply Advance Healthy China Action. *Healthy China Observation.* 2022;(04):11.
- [9] Work Plan for Exploring Characteristic Dementia Prevention and Treatment Services. National Health Commission.
- [10] Release of China's First "Survey Report on Living Conditions of Alzheimer's Disease Patients' Families". *People's Daily.*
- [11] Li G, Larson EB, Shofer JB, et al. Cognitive trajectory changes over 20 years before dementia diagnosis: a large cohort study. *J Am Geriatr Soc.* 2017;65:2627-2633.
- [12] Wang D, Liu YH, Zhu XM, Yang HP, Suo JD, Shen XL, Liang WN. WHO and 25 countries/regions' dementia action plans and their implications for China. *Chin Gen Pract.* 2022;25(25):3075-3082+3096.
- [13] Opinions of the CPC Central Committee and State Council on Strengthening Aging Work in the New Era. *Gazette of the State Council of the People's Republic of China.* 2021;(Issue 34).
- [14] Yang J, Li SQ, Zhang ZX, et al. Qualitative study on community general practitioners' cognition of dementia screening. *Chin Gen Pract.* 2022;25(16):1978-1983.
- [15] Livingston G, Sommerlad A, Orgeta V, et al. Dementia prevention, intervention, and care. *Lancet.* 2017 Dec 16;390(10113):2673-2734.
- [16] Zeng YL, Zhang WY, Lu YM. Visual analysis of research hotspots and frontiers on quality of life in dementia patients over the past decade. *Chin J Mod Nurs.* 2021;27(08):1038-1045.
- [17] Policy Recommendations for Improving Alzheimer's Disease Prevention and Control System. Shanghai Medical Innovation Development Foundation.
- [18] Jia JP, Li Y. Current status and future of dementia in China. *Chin J Neurol.* 2020;53(02):81-84. DOI: 10.3760/cma.j.issn.1006-7876.2020.02.001

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