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Review

Early Alzheimer's disease (mild cognitive impairment or mild dementia): Prevalence, diagnostics, treatment options, and guidelines in Asia, Australasia, and Pacific nations countries

Jung-Lung Hsu [a], Kee Hyung Park [b], Peter K. Panegyres [c,d], Yao Hsien Huang [e,*], Young In Eom [e], Vinay Prusty [e], Lolita Stephanie Tan [e], Yat Fung Shea [f]

[a] Department of Neurology, New Taipei Municipal TuCheng Hospital, Chang Gung Memorial Hospital and Chang Gung University, New Taipei City, Taiwan
[b] Department of Neurology, College of Medicine, Gachon University Gil Medical Center, Incheon, Republic of Korea
[c] Neurodegenerative Disorders Research Pty Ltd, West Perth, Australia
[d] The University of Western Australia, Nedlands, WA, Australia
[e] Eli Lilly And Company, Indianapolis, IN,USA
[f] Division of Geriatrics, Department of Medicine, Queen Mary Hospital, Hong Kong

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ABSTRACT

Early diagnosis of mild cognitive impairment (MCI) and Alzheimer's disease (AD) with mild dementia is becoming increasingly important to enable patients to receive appropriate treatment with available amyloid-targeting therapies. Reviews of AD prevalence and diagnostic and treatment patterns typically focus on global or western populations, but the situation in Asia, Australasia, and Pacific Nations (AAPN) countries is less clear. We performed a narrative review of literature for AD in several AAPN countries, focusing on patients with MCI or mild dementia who may benefit from early treatment. Published information regarding AD incidence and prevalence and current practice in AAPN countries is limited and the nature of available information differs between countries. However, AAPN countries include some of the most rapidly aging populations and show the associated increasing trend of all-cause dementia prevalence observed globally. Although lecanemab and donanemab are now approved for AD with MCI and mild dementia in several AAPN countries, the most appropriate diagnostic pathway for patients with MCI and early AD is not established. Even though the AAPN region includes countries with routine access to advanced technologies, concerns have already been raised about the ability of healthcare systems in Australia, New Zealand, and Korea to respond to approvals of new AD therapies, including the need to ensure availability of biomarker testing and dementia specialists to allow patients to receive the early diagnosis required to enable appropriate treatment. Guidelines and national policies also need updating to differentiate between dementia subtypes and include amyloid-targeting therapies for eligible patients with early AD.

1. Introduction

Alzheimer's disease (AD) biomarkers are being explored as potential targets for treatment options for early AD and may provide opportunities for clinical monitoring of treatment [1]. Lecanemab received accelerated United States approval for AD in January 2023, followed by traditional approval in July 2023, with the indication stating that treatment should be initiated in patients with mild cognitive impairment (MCI) or mild dementia stages of AD [2]. Subsequent Asia, Australasia, and Pacific Nations (AAPN) country approvals were Japan in September 2023 (launched in December 2023) [3], China in January 2024 (launched in June 2024) [4], Korea in May 2024 [5], Hong Kong in July 2024 [6], Macau in January 2025 [7], and Taiwan in March 2025 [8].

Appropriate use recommendations for lecanemab have also been issued for Japan and Korea [9,10]. The Australian Therapeutic Goods Administration (TGA) recently (March 2025) confirmed its decision (from October 2024) not to register lecanemab, following a sponsor request for reconsideration [11].

There are currently no approved targeted treatments for AD in New Zealand or Pacific nations. Donanemab received approval for MCI and

* Corresponding author at: Eli Lilly and Company (Taiwan) Inc., 14th Floor, No. 9 and 11 Songgao Road, Xinyi District, Taipei City, Taiwan.
E-mail address: huang.yh@lilly.com (Y.H. Huang).

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AD with mild dementia in the United States in July 2024, followed by AAPN approvals in Japan (September 2024), China (December 2024), Taiwan (April 2025) [12], and Australia (May 2025) [13], after showing a significant slowing of clinical progression in patients with early symptomatic AD (MCI or AD with mild dementia) and amyloid or tau pathology, versus placebo, in the randomized phase 3 TRAILBLAZER-ALZ 2 trial [1,3,14–18]. Clinical progression at 76 weeks was significantly slowed in those with low/medium tau and in the combined low/medium and high tau pathology population, and *post-hoc* analyses suggested a greater benefit for patients who begin treatment at an earlier disease stage [1].

As targeted therapies become available, early diagnosis is becoming increasingly important to enable patients with AD to receive appropriate treatment. Reviews of the available data for AD prevalence and diagnostic and treatment patterns typically focus on global or western populations, but the situation in AAPN countries is less clear.

Here we provide a narrative review of the literature available for patients with AD in several countries in the AAPN region, focusing on patients with MCI or mild dementia who may benefit from early treatment.

2. Prevalence of AD with MCI or mild dementia in AAPN countries

The prevalence of AD and all-cause dementia is increasing in AAPN countries and globally, which is generally attributed to an aging population [19–24], and health and social care systems will need to adapt to provide appropriate support for patients and care partners. However, most published data for AAPN countries are based on all-cause dementia or AD dementia of any severity, and data specifically on AD with MCI or mild dementia and the incidence and characteristics of new cases are lacking. As variation in the type of data presented and methods used prevent direct comparisons between countries, a narrative summary of the available literature is presented here. Reported prevalences for individual countries also vary between sources, reflecting differences in study design and focus; for example, in terms of the populations studied, methodology, and sources used. AD prevalence estimates may also be affected by the availability and accuracy of diagnostic biomarker tests in different countries, along with access limitations due to the costs and expertise required to evaluate results [25]. Improving access to routine biomarker testing should be an urgent priority for all countries.

2.1. Australia

AD affects up to 10 % of Australians aged >65 years, rising to ~30 % in those aged >85 years [26]. Dementia Australia estimates that approximately 433,300 people in Australia were estimated to be living with all-cause dementia in 2025; this is expected to increase to ~812, 500 by 2054 [27]. The Australian Institute of Health and Welfare previously published a 2023 all-cause dementia prevalence rate of 411,100, with this rate estimated to be 3- to 5-times higher among first nation people [28].

The Australian Dementia Network (ADNeT) registry was designed to measure the quality of clinical care received by people newly diagnosed with dementia or MCI [29]. Of the 2,369 patients within the Clinical Quality registry (CQR) in 2022, 68 % had a dementia diagnosis (median age 79 years, median Mini-Mental State Exam (MMSE) score 22) and 32 % had MCI (median age 77 years, median MMSE score 27) [29]. AD was the most common dementia subtype (53 %), followed by mixed AD and vascular dementia (23 %). Vascular dementia alone accounted for 10 % of dementia cases and 14 % of cases were of other etiologies [29].

2.2. China

The China Alzheimer report of 2024 provided a comprehensive review of AD and related dementias, including epidemiological trends, economic burden, diagnosis and treatment status, and public health and societal impact [20].

A national cross-sectional study of 46,011 adults aged ≥60 years between 2015 and 2018 estimated the overall age- and sex-adjusted prevalence of AD in China to be 3.9 % (95 % confidence interval (CI) 3.8–4.1), corresponding to 9.83 million people (95 % CI 9.39–10.29) [30]. Respective estimates for all-cause dementia were 6.0 % (95 % CI 5.8–6.3), 15.07 (95 % CI 14.53–15.62) million people. Overall MCI prevalence was estimated at 15.5 % (95 % CI 15.2–15.9), 38.77 (37.95–39.62) million people, although AD-specific data were not reported for MCI [30]. The authors called for authorities to develop dementia prevention strategies for people with MCI and to establish an appropriate MCI and dementia management policy given the growing health and economic burden in China and worldwide [30]. Survey data from 2023 have also suggested a growing trend for younger people being diagnosed with AD, with 21.3 % of patients in the survey being <60 years old, compared with previous reports of 5–10 % [31]. The China Health and Retirement Longitudinal Study (CHARLS 2018) of adults aged ≥50 years also showed all-cause dementia prevalence varied across provinces, highlighting the need for targeted strategies for dementia prevention and treatment [32].

2.3. Hong Kong

"Dementia and AD" was rated as the most feared disease category by Chinese patients aged ≥65 years old in a cross-sectional survey in Hong Kong [21]. In 2018, the Hong Kong Alzheimer's Disease Association Social Welfare Department estimated that ~100,000 people in Hong Kong were living with dementia [33]. The Big Data Analytics Platform identified 23,467 people aged ≥65 years old diagnosed with AD in Hong Kong between January 2007 and December 2017 [34]. Of these, 71 % were female and the median age at diagnosis was 84 years old (range 77–91) [34].

The number of patients with all-cause dementia receiving treatment at public hospitals in Hong Kong increased from 72,900 in 2018 to 84,100 in 2022 [35]. The Hong Kong mental morbidity survey for older people, conducted between 2019 and 2023, examined the cognitive and mental health care needs of 4,368 adults aged ≥60 years living at home and 503 residents of residential care homes (RCHEs) [36]. One-fifth (22 %) of older adults living in the community were found to have mild neurocognitive disorder, with 7.4 % classed as having "major neurocognitive disorders (dementia)." The prevalence of dementia in older adults residing in RCHEs was estimated at around 70 %. Previously reported underlying etiologies of dementia (in 2006) were 73.5 % for AD and 22.4 % for vascular dementia [37].

2.4. Japan

A 2021 report estimated that >5 million people in Japan were living with all-cause dementia and estimated the global cost of dementia at >14.5 trillion yen (~133 billion US dollars) [38]. Nationwide dementia prevalence in Japan is expected to exceed 25 % in people aged ≥65 years by 2045 [39].

The most recent national survey (published in 2012) identified from a systematic review of articles published between January 2000 and November 2015 reported a mean dementia prevalence of 15.75 % (95 % CI 12.4–22.2) in people aged ≥65 years, although the population in most cities studied was older than the national average [40,41]. AD was the most common cause of dementia, comprising 65.8 % of cases [40,41].

2.5. New Zealand

Routinely collected health data from the New Zealand Integrated Data Infrastructure between 2016 and 2020 suggested a crude diagnosed all-cause dementia prevalence of 3.8–4.0 % in people aged ≥60 years and 13.7–14.4 % in those aged ≥80 years [42]. Age-sex

standardized prevalence in 2019–2020 was higher in Māori (5.4 % aged ≥60 years; 17.5 % aged ≥80 years) and Pacific Islander populations (6.3 % aged ≥60 years; 22.2 % aged ≥80 years) than in European (3.7 % aged ≥60 years; 13.6 % aged ≥80 years) and Asian (3.4 % aged ≥60 years; 13.5 % aged ≥80 years) populations [42]. Another study using data from the New Zealand Health Survey from 2011/12 to 2018/19 estimated an all-cause dementia incidence of 19.2 per person-years in people aged ≥60 years, with incidence rates being lower in Asian people versus Europeans [43]. The Neurological Foundation estimates the dementia prevalence in New Zealand will be >170,000 people by 2050 [44].

2.6. Republic of Korea

Data from the National Health Insurance Service Senior Cohort showed that both the annual standardized incidence and prevalence of all-cause dementia in Korea increased steadily from 2003 to 2015 [45].

Prevalences of AD and MCI in Korea have been estimated at around 7 % and 22 %, respectively. Data from the Nationwide Survey on Dementia Epidemiology of Korea (NaSDEK) 2016 showed a standardized AD prevalence in the total population of 7.1 % and a standardized MCI prevalence of 22.3 % [45]. Data from the Korea Dementia Observatory (KDO) 2020 showed an estimated AD prevalence in the total population of 7.7 % and an MCI prevalence of 22.7 % [46].

NaSDEK 2016 reported a standardized all-cause dementia prevalence of 6.9 % in people aged ≥60 years and 9.5 % in those aged ≥65 years [45]. Another population-based study estimated that the prevalence of dementia in people aged ≥65 years in Korea increased from 5.9 % in 2015 to 7.3 % in 2019, with further increases expected in future [23]. The Ministry of Health and Welfare and Korean National Institute of Dementia reported an estimated prevalence of dementia of 886,173 in people aged ≥65 years in 2021, which may be expected to increase to 1.42 million in 2030 and 3.15 million in 2050 [47].

NaSDEK data also indicated an increase in the AD dementia subtype from 70.7 % to 74.4 % of dementia cases between 2008 and 2016, along with a decrease in vascular dementia from 24.4 % to 8.7 % [45].

The total health economic cost of all-cause dementia in Korea increased by approximately 1.5 times between 2015 and 2019, to an estimated 4,218 million US dollars in 2019, a cost per capita of ~6,957 US dollars [23].

2.7. Taiwan

Data from the Taiwan National Health Insurance Research Database from 2004 to 2010 showed an increase in age–sex standardized AD prevalence from 2.3 % to 3.5 % ($P<0.0001$) [48]. However, standardized incidence rates for both all-cause dementia and AD over this time period showed a non-significant decline, with AD incidence falling from 4.9 to 4.6 per thousand person-years. Nonetheless, both incidence and prevalence increased with age and were higher in females than males [48]. The increase in dementia prevalence with age likely explains the expectation that it will exceed 460,000 by 2031 [49]. The first national population-based survey of MCI and dementia (2011–2013) in people aged ≥65 years in Taiwan found an age-adjusted MCI prevalence of 18.8 % and an all-cause dementia prevalence of 8.0 %, with rates of both MCI and dementia being higher in females than males [50]. Another study showed an increase in the annual incidence of all-cause dementia in Taiwan from 30,606 in 2004 to 50,651 in 2017, with a particularly pronounced increase in females [51]. The increase in dementia incidence was accompanied by increases in other comorbidities, further impacting on healthcare resources [51].

2.8. Pacific Nations

There is very little published information on MCI, AD, and related dementias among Pacific Islanders and Native Hawaiians [52,53]. The countries include those of Melanesia (e.g., Papua New Guinea, Solomon Islands, Vanuatu, New Caledonia, Fiji, Nauru, Tuvalu, Wallis and Fortuna, Tonga); Micronesia (Northern Mariana Islands, Guam, Palau, Marshall Islands, Kiribati); and Polynesia (Samoa, American Samoa, Tokelau, Mua, Cook Islands, French Polynesia, Pitcairn Islands, Easter Island, Hawaii). These countries are some of the poorest in the world and most heavily impacted by climate change, particularly rising sea levels [54], which is associated with negative health effects including an increased risk of neurodegenerative disorders [55].

There are limited prevalence data for AD or all-cause dementia in this region, although 2004 data for Chamorros people aged ≥65 years in Guam showed an all-cause dementia prevalence of 12.2 % [56,57]. The absence of data for most Pacific Island countries is concerning as it represents an unknown area of great potential need. Furthermore, ethnicity is associated with AD pathogenesis, and studying the genetic predisposition to AD in these populations may help to enable early diagnosis, especially in people with young-onset AD [58].

3. Current guidelines plus diagnostic and treatment patterns in AAPN countries

The 2024 Alzheimer's Association revised criteria for diagnosis and staging of AD for research purposes now include the use of biomarkers in the diagnosis of AD [59], and International Working Group recommendations include the appropriate use of biomarkers in the context of other evaluations for AD diagnosis in a clinical setting [60,61]. However, a recent systematic review of international and country-specific clinical practice guidelines for AD (53 overall, 15 published between 2018 and 2022) found recommendations had remained largely consistent and unchanged across several countries and global regions over the past 20 years [62].

AD gene testing was reported as not being included in any guidelines, although *Apolipoprotein E* (*APOE*) genotyping is now included in the 2021 revised Korean guidelines [63] and traditional Chinese medicine guidelines (2019) recommend genetic testing of people with a family history [64]. None of the guidelines in the 2022 review recommended screening or biomarker testing for asymptomatic populations [59,62], although the Taiwan Dementia Society recently issued recommendations for the use of blood-based biomarkers for symptomatic patients (alongside other clinical evaluations), biochemistry, and neuroimaging [65], and a Chinese expert consensus recommended population screening to identify people at high risk for AD [66].

Pharmacological treatment for cognitive symptoms was only recommended for people with AD dementia; no severity level was stated for this, but medication was not recommended for people with MCI [62]. AAPN guidelines included in the systematic review were from Australia (2018/2019, but these were for deprescribing cholinesterase inhibitors and memantine; [67,68]), China (2019, traditional Chinese medicine; [64]), Korea (2021; [63]) and Taiwan (2021; [69]); those from Korea and Taiwan were reported to cover both AD and MCI but only the 2017 American Academy of Neurology guidelines [70] were reported to clearly refer to "MCI due to AD" [62]. A screening flowchart for MCI has been proposed by researchers from Australia and China, aimed at enabling timely subsequent investigation and disease differentiation [71].

A systematic review and meta-analysis of AD diagnostic test accuracy in developed and developing countries found that accessibility of some biomarkers varies between countries, with the associated costs and expertise required limiting their use in developing countries [25]. However, China and Australia were the only AAPN countries included in the analysis; of the 84 studies analyzed, four were from China and the number from Australia was not stated (categorized as "low").

A summary of AAPN country recommendations relevant to early AD identified during this review is provided in Table 1. As the guidelines vary between countries in terms of the level of detail and focus, it was not possible to perform further direct comparisons. Details of the

Table 1
Overview of AAPN country-specific guidelines relevant to early Alzheimer's disease.

Guideline	Countries recommending this point (Ref number)
Clinical assessment	
Neuropsychological assessment, followed by blood biomarkers and imaging for population screening to identify people at high risk for AD	China [66]
Follow up patients with subjective cognitive decline every 1–2 years	Korea [63]
Review of patients with MCI (e.g., after 6–18 months)	Australia [72]
Mini-Mental State Examination for screening and diagnosis of dementia	Korea [63]
Neurological examination for differentiating between dementia subtypes in patients with MCI or dementia	Korea [63]
Standard evaluation	
Use of PET scan or CSF testing for population screening to identify people at high risk for AD (if an individual is undiagnosed after neuropsychological assessment, followed by blood biomarkers)	China (66
Brain MRI scan	Australia [72], Korea [63]
PET scan	Australia [72], Korea [63]
CT scan	Australia* [72]
Blood biochemistry analysis	Australia [72]
AD biomarker analysis	
Use of blood biomarkers for population screening to identify people at high risk for AD (if an individual is undiagnosed after neuropsychological assessment)	China [66]
Use of CSF Aβ, total tau, and phosphorylated tau tests to differentiate between AD and other dementias	Korea [63]
General "biomarker" testing recommendation	Australia† [72], Japan [41]
Use of blood-based biomarkers for symptomatic patients, alongside other clinical evaluations, biochemistry, and neuroimaging	Taiwan [65]
Patients with a dementia diagnosis who are suspected of having MCI or mild dementia due to AD should receive appropriate fluid biomarker testing or amyloid PET	Japan [90], Dementia Japan [91]
Genetic testing	
Apolipoprotein E genotyping	Korea [63]
Genetic testing of people with a family history of AD	China [64], Hong Kong [85]

* Single-photon emission CT scanning is not considered accurate enough for use.

† For patients with a persistent history of clear cognitive degeneration over 6–12 months if PET scan unavailable.

AAPN: Asia, Australasia, and Pacific nations; AD: Alzheimer's disease; CT: computed tomography; MCI: mild cognitive impairment; MRI: magnetic resonance imaging; PET, positron emission tomography.

guidance available for individual countries is therefore summarized narratively throughout this section.

3.1. Australia

Nationally informed recommendations for the detection, assessment and management of MCI were published in 2022 [72]. These guidelines are not specific to MCI in AD but recommend a computed tomography (CT) scan (along with blood biochemistry) at a minimum, along with magnetic resonance imaging (MRI) where available. The 2024 Australia Dementia Network Memory and Cognition Clinic Guidelines included practice points (aspirational criteria) regarding the use of advanced neuroimaging (e.g., positron emission tomography (PET)) and cerebrospinal fluid (CSF) biomarkers where further diagnostic information is needed [73]. Future guidelines are expected to include analysis of blood-based biomarkers to aid in the early detection of AD.

Increased numbers of people presenting with possible MCI, notably to General Practitioners (GPs), is expected to rise dramatically in the coming years. GPs are recommended to consider referring patients for secondary consultation as ~40 % of clinical MCI cases may be due to non-AD neurodegenerative diseases or psychiatric conditions. Patients with a persistent history of clear cognitive degeneration over 6–12 months should be offered other biomarker testing if PET scanning (fluorodeoxyglucose or amyloid) is unavailable [72]. Patients with MCI should ideally be reviewed at 6–12 months but certainly within 18 months, and earlier review may be needed if concerns are identified [72].

Most patients with dementia are diagnosed in hospital, with only ~15 % of patients diagnosed in memory clinics [74]. However, GPs and other non-dementia-specialist clinicians are expected to refer patients to specialists such as geriatricians and neurologists for management and treatment, which may take place at a public or private memory clinic.

Dementia experts are calling for changes to Australasian healthcare systems to allow the appropriate use and monitoring of new AD treatments and provide diagnostic and healthcare professional (HCP) training facilities [75], following concerns about the preparedness to deal with the costs and potential safety events associated with new treatments [74]. PET and CSF AD biomarker testing, required for the prescription of monoclonal antibody therapies, are not currently available on universal healthcare in Australia [74]. Early dementia screening is recommended to help enable timely access to appropriate treatment [76].

New clinical practice guidelines and diagnostic biomarkers guidelines for AD in Australia are due to be published between 2024 and 2026 and are expected to highlight the need for a considerable change in healthcare infrastructure to aid in the early detection of AD.

3.2. China

MRI and CT are regarded as important in distinguishing AD from other dementias [20]. MRI is the first choice for routine imaging due to its high resolution, with CT used when MRI is contraindicated [20]. Use of PET is restricted due to cost and the historical lack of effective targeted therapies, and a comprehensive evaluation is needed to consider the economic costs versus potential health benefits [20]. A 2024 expert consensus recommended neuropsychological assessment, followed by blood biomarkers and imaging for population screening to identify people at high risk for AD, with future work needed to validate low-cost accessible methods [66].

A 2023 expert consensus recommended that Aβ-PET results (with a binary positive/negative interpretation) should be used in combination with other clinical and neuropsychological characteristics, other imaging data, and other biological markers for the diagnosis of AD [77]. Although Aβ-PET is considered important to provide qualitative and semi-quantitative measurement of β-amyloid in the brain *in vivo*, there are ethical concerns about disclosing a positive Aβ-PET result to people with preclinical AD and their relatives [20]. Fluid biomarkers (e.g., blood, urine, CSF) are not widely used in clinical practice; the main limitation with CSF biomarkers is that an invasive lumbar puncture procedure is required that cannot be performed in most memory clinics in China [20].

Memory clinics are increasingly being used to diagnose and treat patients with AD presenting with MCI early in the disease course [20]. Both pharmaceutical and non-pharmaceutical interventions are used in the treatment of AD, with most pharmacotherapies aimed at improving cognition and relieving neuropsychiatric symptoms [20]. Traditional Chinese medicine still features in many AD clinical trials in China, although other trials are evaluating anti-Aβ therapy, neuromodulation therapy, and stem cell-based therapy [20].

General practitioner (GP) attitudes and knowledge are important in the early management of MCI; a cross-sectional study of 1,253 GPs in Shanghai found MCI knowledge was low, with >12 % of GPs having no knowledge and 28 % not considering MCI as a disease. However, most

respondents agreed or strongly agreed with MCI management as a strategy to delay AD occurrence (68.8 %) and to support MCI screening (67.5 %) and timely diagnosis (63.1 %) [78]. Compliance with relevant guidelines was higher for GPs with more training and knowledge and more favorable attitudes towards MCI. The authors recommended further study of factors affecting GP attitudes [78].

3.3. Hong Kong

The importance of early diagnosis of dementia is being increasingly recognized by HCPs and patients in Hong Kong and a cross-sectional survey indicated that patients would like to be told about their diagnosis early to enable them to access treatment and support [21]. Diagnosis and management of AD is mostly undertaken by geriatricians, followed by neurologists and psychogeriatricians. Plain CT remains the initial neuroimaging of choice. MRI, amyloid PET imaging, and fluorodeoxyglucose (FDG)-PET scans are commonly utilized in patients with diagnostic difficulties [79,80]. Although some cut-off values for CSF biomarkers (p-tau 181, total tau, amyloid β42 and their ratios) have been validated for AD diagnosis in Hong Kong [81], acceptance of CSF analysis remains low because of its invasiveness and need for clinical admission. Blood-based biomarkers for AD (p-tau 181, p-tau 217, and PlasmarkAD (proteomics platform)) are available locally via private laboratories for the early detection of MCI or AD [82–84]. Genetic testing for familial AD may be offered for people with a strong family history, a family history of early-onset AD or for those with suspected early-onset AD; genetic testing for hereditary dementias is available at local laboratories of public hospitals after consulting medical biochemists [85,86].

The Hong Kong Geriatrics Society reports an annual conversion rate of amnestic MCI to AD dementia of ~5–10 % [85]. The Society recognizes the pre-MCI stage, including transitional cognitive decline (TCD), subjective cognitive decline (SCD) and mild behavioral impairment (MBI); people with TCD, SCD, MBI, or MCI may progress to AD [85,87]. In a study of 88 people from a memory clinic in Hong Kong, the prevalence of MBI was 7 % in the cognitively normal/SCD group (n=43) and 11.1 % in the MCI group (n=45), as assessed by the MBI-checklist [88]. The International Working Group (IWG)-2, Diagnostic and Statistical Manual of Mental Disorder (DSM)-5 and the National Institute on Aging and Alzheimer's Association (NIA-AA) criteria are used in the diagnosis of AD [85].

Drugs used in treating dementia include donepezil, rivastigmine, galantamine, and memantine [33], although lecanemab was approved for AD with MCI or mild dementia in Hong Kong in July 2024 [6]. Other drugs may be used to treat associated disorders such as depression, anxiety or sleeping disorders, and non-pharmacological treatments are also encouraged [33]. A study of people with AD between 2007 and 2017 reported that 39.9 % of people were receiving dementia medication, with other medication classes including antipsychotics (50.7 % had used these at least once), antidepressants (40.3 %), and hypnotics (29.1 %); However, the data were not stratified by stage of AD [34].

3.4. Japan

Clinical practice guidelines for dementia management were developed in 2010 by six major Japanese societies and provided specific guidance for AD [41]. These guidelines recommend that AD diagnosis should be based on psychiatric and neurological signs, imaging, and biomarker presence. Donepezil was the only recommended medication approved and indicated for AD dementia in these guidelines, but galantamine, rivastigmine, and memantine were subsequently recommended in 2012 based on meta-analyses. The evidence for non-pharmacotherapies was considered weak, although non-pharmacological interventions and patient care programs are used to help control the behavioral and psychological symptoms of dementia and improve quality of life for patients and their care partners. The guidelines were updated in 2017; there were no significant changes to the AD treatment algorithm but the need for more data on real-world clinical practice for AD in Japan was highlighted [41,89].

In 2023, guidelines for the use of PET and fluid biomarkers recommended that patients should first receive a clinical assessment for dementia as per the 2017 guidelines [89–91]. Those who subsequently receive a dementia diagnosis and are suspected as having MCI or mild dementia due to AD should then undergo further testing using appropriate fluid biomarkers or amyloid PET to determine whether they are eligible for targeted treatments that require confirmation of amyloid pathology evidence [90,91].

3.5. New Zealand

Most patients are diagnosed with dementia in memory clinics and dementia is mainly treated in the primary care setting [74]. As reported for Australia, changes to New Zealand healthcare systems will be required to address concerns about the preparedness to deal with the costs and potential safety events associated with new AD treatments [74]. Amyloid PET or CSF AD biomarker testing—required for the prescription of monoclonal antibody therapies—are also not currently available on universal healthcare in New Zealand [74] and will require the use of secondary care centers.

The strategy for registration of a new medication in New Zealand is typically based on it first being approved in Australia, simplifying its approval in New Zealand. This can lead to inequalities in access to medications in New Zealand compared with other countries. Inequalities in access to currently available dementia medications have also been reported within New Zealand [92]. A retrospective population study found dementia medications were less likely to be dispensed to people of Māori, Pacific, Middle Eastern, Latin American, or African ethnicities, versus those of European ethnicity. People aged 65–79 years were more likely to receive dementia medication than those aged <65 years or ≥80 years, although there were no statistically significant differences between males and females [92].

3.6. Republic of Korea

The 2021 revised Korean clinical practice guideline for dementia (diagnosis and evaluation) includes a description of "SCD regarded as a preclinical stage of AD," along with the inclusion of amyloid PET to identify amyloid-β protein *in vivo* [63]. The guideline notes that elderly patients with SCD have a higher risk of future progression to dementia (or AD dementia) versus those without SCD and therefore recommends these patients are followed up every 1–2 years. A Clinical Dementia Rating is recommended as a diagnostic tool for dementia (moderate level of evidence, strong grade of recommendation); MMSE is recommended for dementia screening (high level of evidence, strong grade of recommendation), and diagnosis (high level of evidence, weak grade of recommendation). Neurological examination is then recommended for differentiating between dementia subtypes in patients with MCI or dementia (moderate level of evidence, strong grade of recommendation). CSF amyloid-β, total tau, and phosphorylated tau tests are recommended to increase the accuracy of the diagnosis (high level of evidence, weak grade of recommendation) and *APOE* genotyping can be helpful in prognostic evaluation as well as diagnosis (moderate level of evidence, weak grade of recommendation). Assessing the degree of medial temporal lobe atrophy with brain MRI (moderate level of evidence, strong grade of recommendation) and use of amyloid PET scans (high level of evidence, weak grade of recommendation) are also recommended to increase diagnostic accuracy of AD [63].

Donepezil, rivastigmine, galantamine, and memantine are approved for the treatment of dementia, although no medications are approved for managing the associated behavioral and psychological symptoms [93]. However, evidence-based clinical practice guidelines for the pharmacological treatment of behavioral and psychological symptoms of

dementia were recently published by the Korean Dementia Association [117]. The guidelines provide conditional recommendations for the use of antipsychotics (e.g., risperidone, brexpiprazole), antidepressants (e.g., citalopram), cognitive enhancers (e.g., donepezil, memantine), and pimavanserin, depending on symptom presentation and dementia subtype. Emphasizing individualized treatment strategies, the guidelines balance therapeutic efficacy with potential risks, with all recommendations graded according to the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) methodology [117].

In response to the recent availability of lecanemab in South Korea, the Korean Dementia Association has issued clinical recommendations aimed at guiding physicians in the safe and effective implementation of this disease-modifying therapy in routine practice [118].

The introduction of further targeted therapies for AD is expected but, as for other countries, concerns have been raised regarding the ability of the healthcare system to enable blood biomarker testing in a timely manner [94].

3.7. Taiwan

The Taiwan Dementia Society recently issued consensus recommendations for the use of blood-based biomarkers for patients with symptoms of AD to aid with a differential diagnosis of AD from other dementias [65]. The use was recommended to assist with clinical diagnosis and prognosis of patients with cognitive symptoms, although the results need to be interpreted by dementia specialists alongside other clinical evaluations, biochemistry, and neuropsychological and neuroimaging information [65].

The Taiwan Dementia Treatment Guideline is focused on treatment options for AD and other dementias [69]. Although the guideline advises treating AD dementia at an early stage, it does not recommend pharmacological therapy for patients with MCI but reviews supporting evidence for non-pharmacological interventions, such as exercise [69].

3.8. Pacific Nations

There are no known guidelines for the diagnosis or treatment of dementia in the Pacific nations.

4. Dementia and AD policies in AAPN countries

Hong Kong, Japan, Korea, and Taiwan were included in a recent review of all-cause dementia care and policy in five Asian regions (also including Thailand); this review did not focus on MCI or AD specifically but highlighted the need to establish a dementia committee for Asia regions [95].

4.1. Australia

Australia was one of the first countries to develop a national comprehensive dementia policy initiative [96]. The first initiative was the National Plan for Dementia Care 1992–1997, and dementia is now established as a key priority in the national aged care agenda. Initiatives and recommendations include improved early intervention assistance, with a localized dementia-specific pathway for use by GPs. The new 10-year National Dementia Action Plan 2024–2034 states eight high-level actions focused on improving the lives people living with dementia and their care partners [97].

Australia's recently increased funding for AD and dementia research has allowed the country to play a leading role in related international and Asia–Pacific research projects [28,96].

4.2. China

The Healthy China 2030 Planning Outline and Healthy China Action Plan (2019–2030) are national policies launched in 2016 and 2019, respectively, that focus on the importance of caring for and preventing AD in an aging population, with the goal of decreasing the growth rate of AD in the population by 2030 [20]. The Chinese National Healthcare Commission also launched a notice on the Promotion of Dementia Prevalence and Treatment (2023–2025), which includes emphasis on increasing public awareness, early screening and intervention for AD, with the capability of building collaboration between professional service providers [32].

In 2024, the Chinese expert consensus on the diagnosis and treatment of MCI due to AD issued a framework and recommendations for the diagnosis and treatment of MCI due to AD encompassing seven key aspects: epidemiology; pathogenesis; clinical manifestations; diagnosis; differential diagnosis, treatment strategies and guidance for medical professionals; risk factors; and preventive measures. The initiative aims to facilitate early diagnosis, timely intervention, and precise treatment of AD, addressing the escalating challenges posed by the aging population and the associated rise in AD prevalence [98].

4.3. Hong Kong

A 2017 report from the Hong Kong Government Review Committee on Mental Health made 10 suggestions regarding the provision of nursing care and support for people with dementia [99]. Suggestions included improving public education, supporting HCPs and care partners, strengthening specialist services, and improving health and social care services.

Project Sunrise was initiated by the Hong Kong Alzheimer's Disease Association to train GPs in the diagnosis of early AD, including increasing awareness of unusual presentations [100]. In September 2018, the Hong Kong Alzheimer's Disease Association Social Welfare Department launched the "Dementia Friendly Community Campaign" aimed at raising public awareness and understanding of dementia [33]. The Dementia Community Support Scheme has been in place since 2019 to provide dementia community support services to elderly persons with mild or moderate dementia and their care partners in the community through the participation of District Elderly Community Centres [101].

4.4. Japan

Japan has a National Dementia Plan (NDP) that includes the availability of diagnostic services and Medical Centers for Dementia to promote diagnosis and includes early dementia diagnosis as a target [102]. The "National Framework for Promotion of Dementia Policies" was adopted in 2019; it focuses on improving inclusivity of people with dementia and risk reduction by delaying the onset or progression of dementia [103]. A Basic Plan for the Promotion of Policies on Dementia was subsequently approved in December 2024, further dedicated to improving understanding, independence, and support for people with dementia [104].

4.5. New Zealand

The Alzheimer's NZ Dementia Services and Standards model was developed to align strategies, policies, and evidence of effective approaches so that services can be developed accordingly [105].

4.6. Republic of Korea

Korea has an NDP that is legislated under the Dementia Management Act [102,106]. There is also a National Dementia Initiative, included as a complementary plan to the third NDP [102]. Korea's NDP includes early dementia diagnosis as a target. Currently, 256 Dementia Reassurance Centers are operating to promote early diagnosis of people with dementia and provide support for both patients and care partners [102].

4.7. Taiwan

The Taiwan Government Ministry of Health and Welfare published a "Framework for Dementia Prevention and Care" in 2013, which raised seven areas of dementia care policy. A second version of the framework, announced in 2017 and adopted in 2018, listed seven strategies relating to diagnosis, treatment, management, raising awareness, and family support for dementia care, aligned with the World Health Organization Global Plan of Action for Dementia [49,107].

The Dementia Care Policy in Taiwan commenced in 2018, leading to the establishment of dementia integrated care centers (DICCs) and dementia community service sites (DCSSs) and upgrading dementia diagnosis, treatment, and care management [49]. The policy also aims to create a dementia-friendly society [49].

4.8. Pacific Nations

No information on dementia or AD policies in Pacific nations was identified during this review. However, in 2021, Natives Engaged in Alzheimer's Research was awarded a National Institute of Aging grant aimed at reducing disparities associated with AD and other dementias in American Indian, Native Alaskan, Native Hawaiian, and Pacific Islander groups [108,109]. The resulting information is expected to help improve access to dementia diagnosis, care, and treatment.

5. Conclusions and future perspectives

This narrative review summarizes the prevalence of MCI and AD in AAPN countries and the associated diagnostic and treatment patterns. The global prevalence of all-cause dementia is expected to increase to more than 150 million in 2050 (from 57 million in 2019), with half of the affected people living in the Western Pacific Region, and there is an urgent need for public health planning to provide the necessary resources to support patients and care partners [24,110–112]. AAPN countries include some of the most rapidly aging populations in the world and show the associated increasing trend of all-cause dementia prevalence observed globally. However, the most appropriate diagnostic pathway for patients with MCI and early AD is not established and the infrastructure for diagnosis and access to new targeted treatments is not necessarily readily available. Pacific Island nations also include some of the poorest countries, where access to basic dementia diagnosis and management may be limited. A recent review called for urgent intergovernmental collaboration and investment across Western Pacific countries to help enable equitable access to new diagnostic methods and amyloid-targeting therapies as they become available [111]. Another report highlighted the need for comprehensive national plans to ensure availability of resources and improve education and training [112].

Published information regarding AD incidence and prevalence and current practice regarding early AD in AAPN countries is meagre and the amount and nature of the available information also differs between studies and countries. We were therefore able to provide a narrative summary of the information but were unable to perform direct comparisons between sources. Available information is mostly based on all-cause dementia or AD of any severity and further information is needed to allow countries to plan accordingly.

Although the AAPN region includes countries with routine access to advanced technologies, concerns have already been raised about the ability of healthcare systems in Australia, New Zealand, and Korea to respond to approvals of new AD therapies, including the need to ensure the availability of biomarker testing and dementia specialists to allow patients to receive the early diagnosis required to enable appropriate treatment and avoid long waiting lists. Training will also be required to upskill HCPs in the use of new imaging technologies and interpretation of biomarker results for the diagnosis and staging of AD.

Many current AAPN guidelines focus on all-cause dementia and updates are needed to differentiate between dementia subtypes and include amyloid-targeting therapies for eligible patients with early AD. National policies and healthcare systems also need to adapt to accommodate the increasing AD prevalence as, even if disease modifying therapies become available, the current policies, guidelines, and infrastructure may mean that appropriate patients may not get access. It will also be important to identify any inequalities in treatment access (e.g., according to ethnicity or age, as reported for currently available medications [92]) to ensure all eligible patients receive the appropriate treatment. Further research may help identify other factors associated with increased dementia risk and possible reasons for any conflicting data [113]. For example, although most reports in AAPN and other countries show a higher risk/prevalence in females [45,48,95,114], male sex was among factors associated with increased dementia risk in a nationwide survey in Korea [115]. Policies and planning also need to consider the psychological and socioeconomic effects of AD on patients, care partners, and the general population, as well as the resources needed for comorbidities in an aging population [51].

Further knowledge and understanding regarding the epidemiology of early AD in different countries will help healthcare systems to plan appropriate treatment patterns and resources. The inclusion of biomarkers in the 2024 Alzheimer's Association revised criteria for diagnosis and staging of AD for research purposes [59] and International Working Group recommendations for appropriate use of biomarkers in a clinical setting [60,61] reflects the need to distinguish between AD and other dementias at an early stage to enable patients to receive optimal treatment; this will become increasingly important once targeted therapies become available and urgent action is needed to ensure that the required staff training and resources are available to support their introduction and routine use. We therefore recommend that future revisions of AAPN guidelines follow the lead of these guidelines. Biomarker screening and imaging for people with MCI will also help to distinguish between those in a predementia stage of AD or other dementias and those who may return to a normal MMSE score [116]. The ability to provide early diagnosis and treatment of those with AD, while reassuring and avoiding inappropriate diagnosis of those with temporarily reduced MMSE scores may also help to encourage people with symptoms to come forward for early testing. More studies are required to help support and monitor the use of different AD biomarkers in individual countries, including those in poorer Pacific nations.

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CRediT authorship contribution statement

Jung-Lung Hsu: Writing – review & editing, Writing – original draft, Investigation, Data curation. **Kee Hyung Park:** Writing – review & editing, Writing – original draft, Investigation, Conceptualization. **Peter K. Panegyres:** Writing – review & editing, Writing – original draft, Investigation, Formal analysis, Data curation. **Yao Hsien Huang:** Writing – review & editing, Writing – original draft, Investigation, Data curation, Conceptualization. **Young In Eom:** Writing – review & editing, Writing – original draft, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Vinay Prusty:** Writing – review & editing, Writing – original draft, Formal analysis, Conceptualization. **Lolita Stephanie Tan:** Writing – review & editing, Writing – original draft, Investigation, Data curation. **Yat Fung Shea:** Writing – review & editing, Writing – original draft, Investigation, Formal

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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