



Mapping Southeast Asia's System Readiness for Anti-Amyloid Therapies: A Scoping Review

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There are stark differences in the readiness of health systems for anti-amyloid therapies across Southeast Asia. Major gaps include diagnostic infrastructure, workforce capacity, regulatory approval, and reimbursement pathways. Limited access to validated biomarkers is a key barrier to equitable implementation, demonstrating the need for coordinated regional strategies to strengthen screening, referral, and policy integration.

INTRODUCTION

- Access to anti-amyloid therapies (AAT) for Alzheimer's disease varies widely across Southeast Asia (SEA), but data on implementation readiness are limited
- We aim to evaluate the readiness of healthcare systems across SEA countries to adopt routine anti-amyloid therapy, considering differences in economic resources and healthcare infrastructure

METHODS

- We conducted a scoping review following JBI Scoping Review Network and PRISMA-ScR guidelines
- Searched PubMed and Ovid MEDLINE for studies published over the past 10 years (up to 31 Dec 2025), supplemented with grey literature (Google Advanced Search) and key organisations (e.g., WHO-IRIS, World Bank, ASEAN Secretariat, national ministries and regulatory agencies)
- Extracted data on diagnostic capacity, regulatory frameworks, workforce, and financial coverage for synthesis

RESULTS

We included 22 studies from 2,287 records; the primary reasons for exclusion were non-SEA settings, non-English full-text articles, and the absence of relevant readiness outcome (Figure 1)

This highlights a significant lack of AAT readiness research in SEA

Most SEA countries fall below global averages for physician (1.72 per 1,000) and nurse density (3.77 per 1,000), except Brunei, Malaysia, and Singapore for physicians, and Brunei, Indonesia, the Philippines, and Singapore for nurses (Table 1)

Table 1: Workforce, Biomarkers, and Treatment Availability for Anti-Amyloid Therapy in Southeast Asia

COUNTRY	WORKFORCE (PHYSICIAN/1000)	BIOMARKER AVAILABILITY	AA THERAPY
Brunei	1.91	C-/B-/P-	-
Darussalam			
Cambodia	0.21	C-/B-/P-	-
Indonesia	0.69	C++/B+/P-	Awaiting approval
Lao PDR	0.33	C-/B-/P-	-
Malaysia	2.32	C++/B-/P-	+Lecanemab
Myanmar	0.75	C-/B-/P-	-
Philippines	0.79	C-/B-/P-	-
Singapore	2.60	C++/B++/P++	+Donamemab +Lecanemab
Thailand	0.93	C++/B++/P++	+Lecanemab
Timor-Leste	0.77	C-/B-/P-	-
Vietnam	1.11	C-/B-/P-	-

C: Cerebrospinal fluid, B: Blood, P: Positron Emission Tomography

'++' = Available (Amyloid & Tau), '+' = Available (Amyloid OR Tau), '-' = Not available

*Listed biomarkers may currently be available locally for research purposes and not for commercial use

Figure 1: PRISMA Flowchart

Identification of studies via databases and registers

Identification

Records identified from:
Databases (n = 218)
Organisations/Regulatory bodies/Technology agencies (n = 419)
Websites (n = 1650)

Records removed before screening:
Duplicate records removed (n = 91)
Not relevant to outcome (n = 1983)

Screening

Records screened:
Databases (n = 127)
Organisations/Regulatory bodies/Technology agencies (n = 39)
Websites (n = 47)

Records excluded** (n = 134)

Reports sought for retrieval (n = 79)

Reports not retrieved (n = 1)

Reports assessed for eligibility (n = 78)

Reports excluded:
Non-SEA setting (n = 8)
Non-English (n = 7)
Findings did not match outcome (n = 41)

Included

Studies and reports included in review (n = 22)

CONCLUSIONS

- Only Singapore and Thailand offer comprehensive testing (CSF, blood, and PET for amyloid/tau). Indonesia and Malaysia have partial CSF/blood testing, while the remaining seven countries have no commercial biomarker availability
- Only Singapore and Thailand have approved AAT, but neither has a reimbursement programme in place.

- Profound disparities exist in health system readiness for AAT deployment across SEA
- Advanced diagnostic infrastructure and regulatory approvals are concentrated in high- and upper-middle-income nations like Singapore and Thailand, leading to inequality in healthcare access
- Lack of financial reimbursement restricts access to AAT, reinforcing wealth-based disparities
- Coordinated regional strategies, modeled on ASEAN cooperation, are needed to support equitable AAT delivery through unified clinical pathways, shared diagnostic registries, and joint health technology assessments.

REFERENCES

- Cai Y, Chong JR, Lai MKP, et al. Predicting Cognitive Decline Using Combined Plasma and Imaging Biomarkers: Evidence from a Singapore Memory Clinic Cohort. *Alzheimers Dement* 2025; 21: e100175.
- Liew TM. A modelling approach to derive population-specific cutoff for plasma p-Tau217. *J Prev Alzheimers Dis* 2025; 12: 100264. 20250703.
- Chong JR, Ashton NJ, Karikari TK, et al. Plasma P-tau181 to Aβ42 ratio is associated with brain amyloid burden and hippocampal atrophy in an Asian cohort of Alzheimer's disease patients with concomitant cerebrovascular disease. *Alzheimers Dement* 2021; 17: 1649-1662. 20210331.

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