



AP-7D value set updates (preliminary)

Singapore and Thailand

Multi-Country Initiatives Through HTAsiaLink

Sharing Session-3 | Room 101 | 03 September 2026, 11:30–12:10 (UTC+8)

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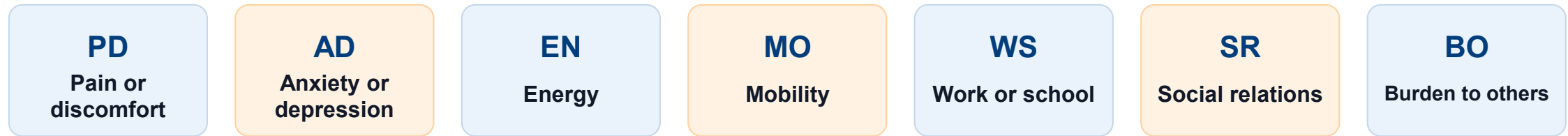
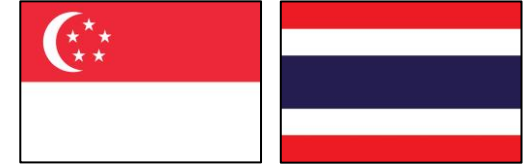
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13th HTAsiaLink 2026



Why AP-7D needs local value sets?

A descriptive system tells us what to measure; a value set tells us how local populations value those states.



Local value sets make AP-7D usable for HTA and regional comparison.

Study design: harmonised valuation in two designs

Web-based surveys in January 2025 used a harmonised AP-7D protocol across two valuation designs.



Recruitment Adults aged 20–69 years; quota sampling by sex and age

Valuation task Ternary DCE and paired DCE with duration; TAP analysis used to separate anchor and sample effects

Quality control Response-pattern checks and time thresholds; final analysis population defined by ANFL = 1

Analytical update HB-CN model with CALE parameterisation applied across ternary, paired DCE and TAP analyses

HB-CN = Hierarchical Bayesian Censored Normal/ CALE = Cross-Attribute Level Effects.

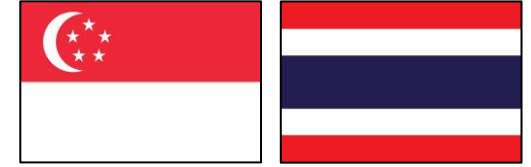
Analysis samples

Design	Singapore	Thailand
Ternary DCE	1,353	2,528
Paired DCE with duration	1,186	2,305
TAP	same ternary respondents	same ternary respondents

TAP = ternary-as-paired; comparison across the three analyses helps separate anchor and sample effects.

Why the CALE HB-CN specification was used?

The final model preserves the AP-7D severity ordering while improving predictive performance.



AP-7D response options and the problem

Level 1
No problems

Level 2
A little

Level 3
Quite a bit

Level 4
Very much

Non-monotonicity

A tariff becomes difficult to defend if a worse AP-7D severity level receives a smaller value loss than a milder level.

How CALE differs from main effects

Main effects

Separate coefficient for each dimension-level cell; ordering can be irregular.

CALE

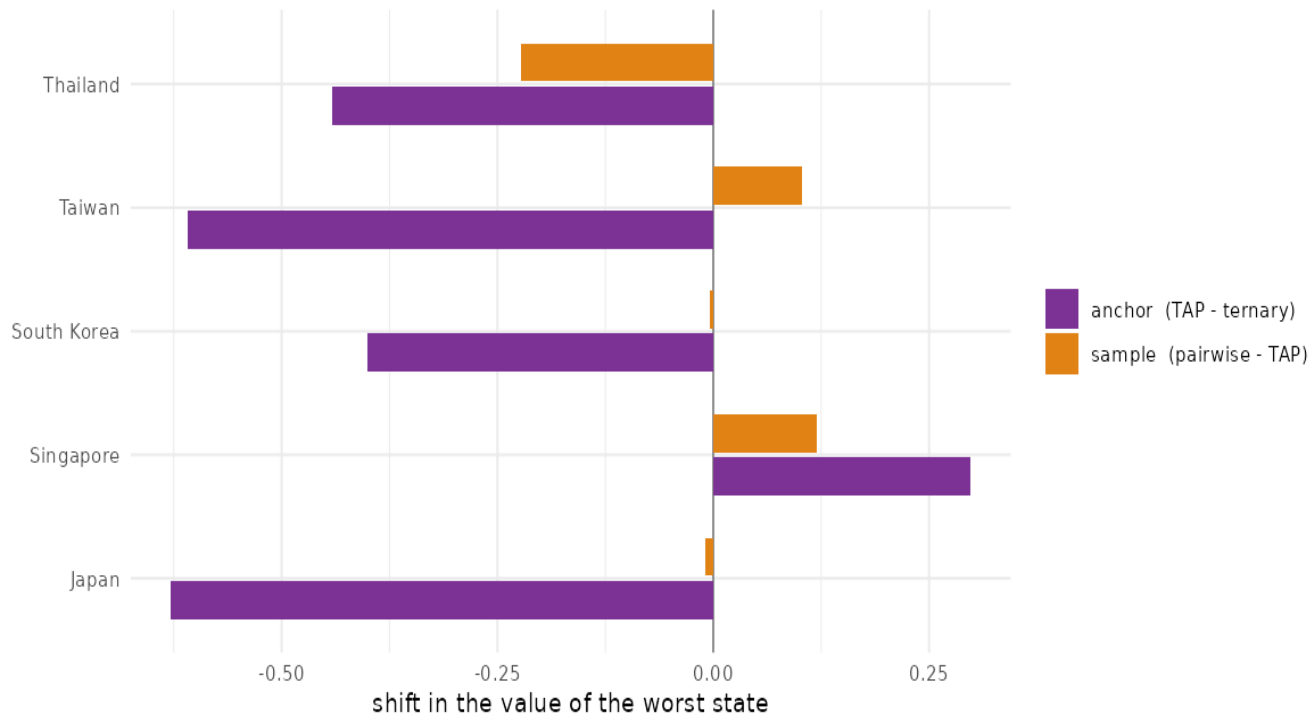
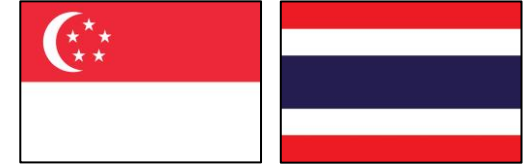
Estimates level-4 dimension losses and shared severity fractions: $0 < L2 < L3 < 1$.

Result: monotone, interpretable AP-7D value sets.

Validation: CALE HB-CN showed the best out-of-sample performance across the five-country analyses and remained best in the latest Thai sensitivity analyses against monotone additive alternatives.

What drives ternary-versus-paired differences?

The latest modelling suggests that the death anchor, rather than the estimation model, explains much of the design difference.



How to read the figure

Purple bars estimate the anchor effect: TAP minus ternary.
Orange bars estimate the sample effect: paired minus TAP.

Main finding

The anchor effect is larger than the sample effect in all five countries. Singapore is the directional outlier.

Implication

Show HB-CN results for both designs, but state clearly that final AP-7D value-set recommendations remain under discussion.

TAP = ternary-as-paired. Pairwise = paired DCE with duration.

Singapore and Thailand HB-CN results: two designs

Ternary and paired DCE with duration estimates are shown side by side; Thailand remains preliminary.

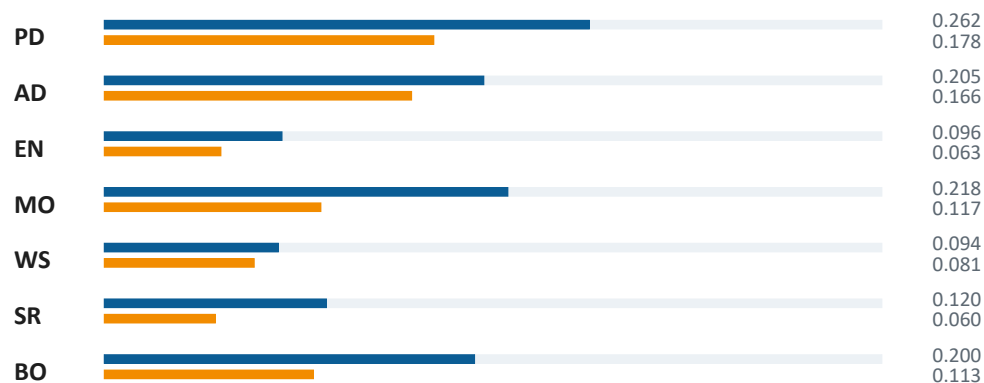


Singapore (preliminary)

■ Ternary ■ Paired DCE

	Ternary	Paired DCE
L2	0.155	0.372
L3	0.449	0.610
Worst state	-0.194	0.223
Largest L4 loss	PD 0.262	PD 0.178

Level-4 absolute QALY loss by dimension

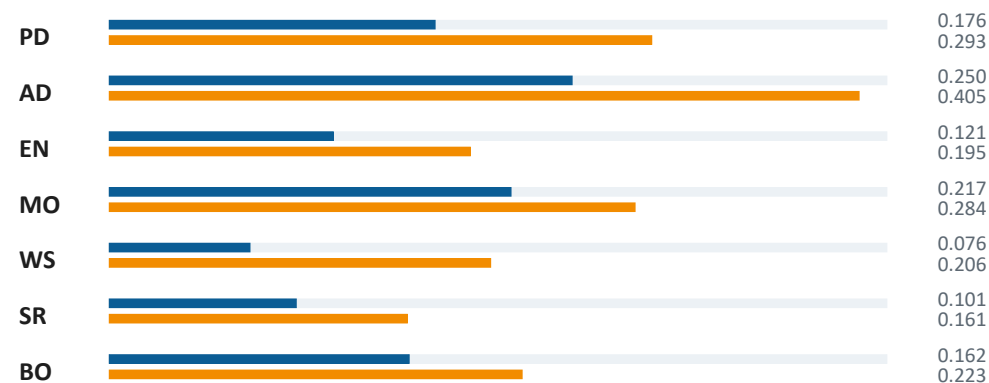


Thailand (preliminary)

■ Ternary ■ Paired DCE

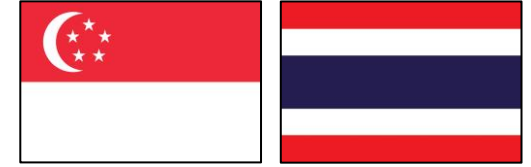
	Ternary	Paired DCE
L2	0.323	0.235
L3	0.581	0.464
Worst state	-0.103	-0.769
Largest L4 loss	AD 0.250	AD 0.405

Level-4 absolute QALY loss by dimension



Design choice affects anchoring: Paired DCE with duration gives above-zero worst states in Singapore but much lower worst states in Thailand; final recommendations are being formulated.

Take-home message



AP-7D is moving towards policy-ready valuation in Asia, but value-set selection must be transparent about design choice.

1

Two valuation designs

Preliminary Singapore and Thailand analyses now cover ternary and paired DCE with duration.

2

Evidence-based model choice

CALE HB-CN showed the strongest out-of-sample performance and preserves monotonicity.

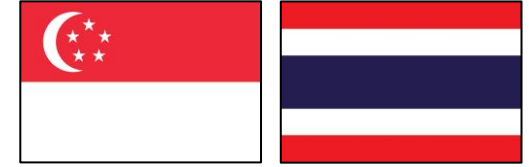
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Design choice matters

Ternary-versus-paired differences appear mainly driven by the death anchor; final recommendations remain under discussion.

Acknowledgements and contributors

With thanks to all collaborators involved in the AP-7D Singapore and Thailand valuation work.



Singapore / NUS

- Assoc Prof Nan Luo
- Dr Ling Jie Cheng (Jeremy)
- Dr Meixia Liao

Thailand / HITAP

- Prof Yot Teerawattananon
- Assoc Prof Wanrudee Isaranuwatchai
- Dr Pritaporn Kingkaew
- Dr Chotika Suwanpanich
- Ms Chanida Ekakkararungroj

AP-7D methods / modelling

- Prof Takeru Shiroiwa
- Dr Kim Rand
- Dr Yasuhiro Morii
- Dr Tatsunori Murata
- Dr Eri Hoshino

Thank you

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