The CE threshold(s) in Thailand

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Identifying priority technical and context specific issues in improving the conduct, reporting and use of health economic evaluation in low- and middle-income countries (Luz et al 2018)

"Without the CE threshold, policy-makers in LMICs found it difficult to interpret and use the CEA results"

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Only UK and Thailand have determined the CE threshold explicitly (Schwarzer et al. 2015)

WB income level	Country/agency	G + U	CM	PM	PCM	3 × GDPPC	T-upper	1 × GDPPC	T-lower	T-unit
					Thresholds					
Explicit										
High	UK NICE	X X'	EoL, cancer drugs fund, PAS	–	–	105,000	60,000	35,000	40,000	QALY
Upper middle	TH HITAP	X	–	–	–	12,000	4000	4000	4000	QALY
Implicit										
High	US	X	EoL care and outcomes	–	–	135,000	111,000	45,000	111,000	QALY
High	AU	X	Specific rules	Integrated pathway, assessment guidelines	–	135,000	34,500	45,000	34,500	QALY
High	SE	X	–	–	–	129,000	117,000	43,000	12,000	QALY
High	CA	X	Cancer treatment	–	–	120,000	44,000	40,000	44,000	QALY

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CE thresholds in Thailand
in Baht per QALY/DALY

100,000 → 120,000 → 160,000

Year 2008-2010 | 2010-2012 | 2013-present

The Thailand's CE thresholds were determined by decision makers (NLEM subcom) without refereeing to per capita GDP or GNI

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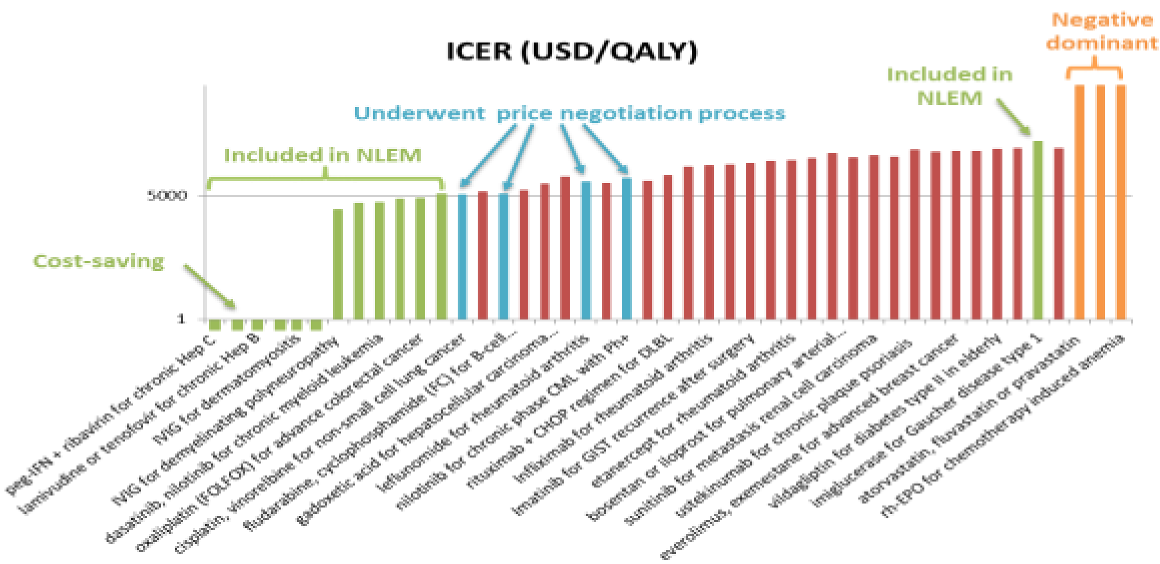
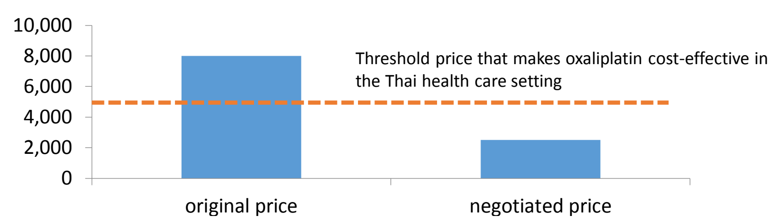
The CE threshold in practice (the inclusion of medicines in the NLEM)



Threshold analysis for price of oxaliplatin



Budget saving from HTA-informed policy decisions in Thailand

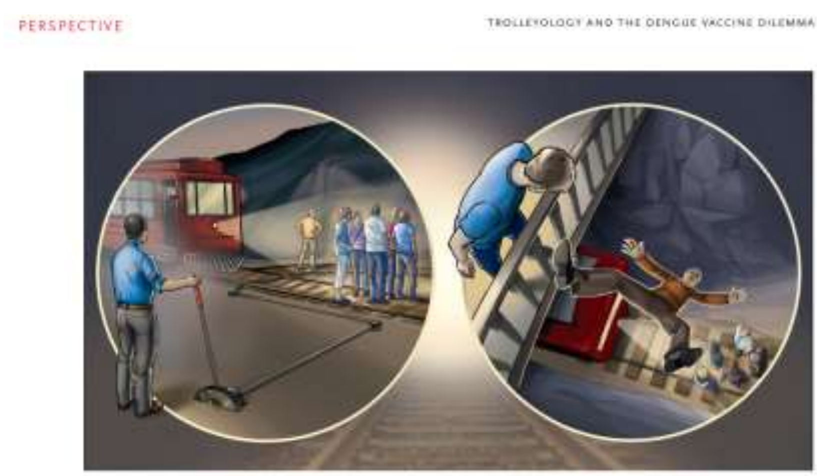
Medicine	Indications	Original price (THB)	Reduced price (THB)	Potential saving (THB per year)
Tenofovir	HIV	43	12	375 million
Pegylate interferon alpha-2a (180 mcg)	Hepatitis C	9,241	3,150	600 million
Oxaliplatin (injection 50 mg/25 ml)	Colon cancer	8,000	2,500	152 million
Angiogenesis inhibitor	Macular disease	40,000 (Ranibizumab)	1,000 (Bevacizumab)	1,200 million

Teerawattananon Y and Tritasavit N. A learning experience from price negotiations for vaccines. Vaccine. 2015 May 7;33 Suppl 1:A11-2.
Teerawattananon Y, Tritasavit N, Suchonwanich N, Kingkaew P. The use of economic evaluation for guiding the pharmaceutical reimbursement list in Thailand. Z Evid Fortbild Qual Gesundhwes. 2014;108(7):397-404

The challenges in using the CE threshold

- The CE threshold is unrelated to budgets; thus, it fails to address affordability e.g. hepatitis C screening and treatment etc.
- Stakeholders will never be happy with the identified threshold
  - Healthcare payers want the threshold to be as low as possible
  - Industry want them to be as high as possible
  - Academics want the threshold to be evidence-based
  - The public want the threshold to be more understandable

The QALY maximization concept may not always be perceived as the most preferable option when making coverage decisions; thus, the CE threshold should not be used in a rigid manner



Source of the figure: Rosenbaum 2018

Determining the CE threshold is not a context-free requirement

- the CE threshold is not used in isolation but in context specific process for decision making supported by other issues e.g. legislation, stakeholder buy-in etc.
- For example, should the country CE threshold being used by global health donors?

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WHO is no longer recommending the CE threshold based on the country's per-capita GDP (Bertram et al 2016)

- *In 2001, the World Health Organization's Commission on Macroeconomics in Health suggested cost–effectiveness thresholds based on multiples of a country's per-capita GDP…..However, experience with the use of such GDP-based thresholds in decision-making processes at country level shows them to lack country specificity and this – in addition to uncertainty in the modelled cost–effectiveness ratios – can lead to the wrong decision on how to spend health-care resources.*

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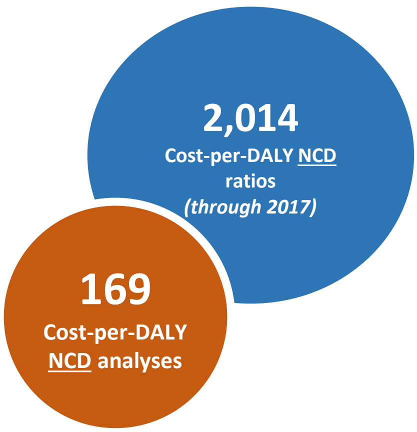
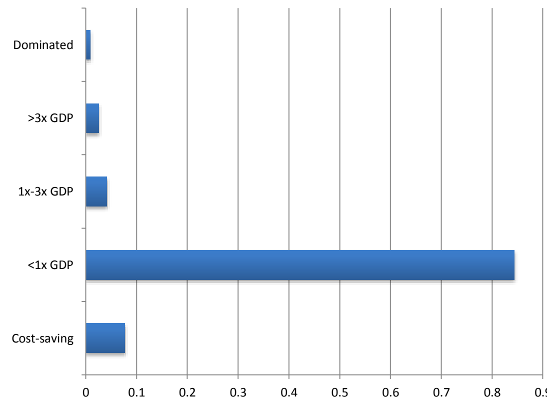
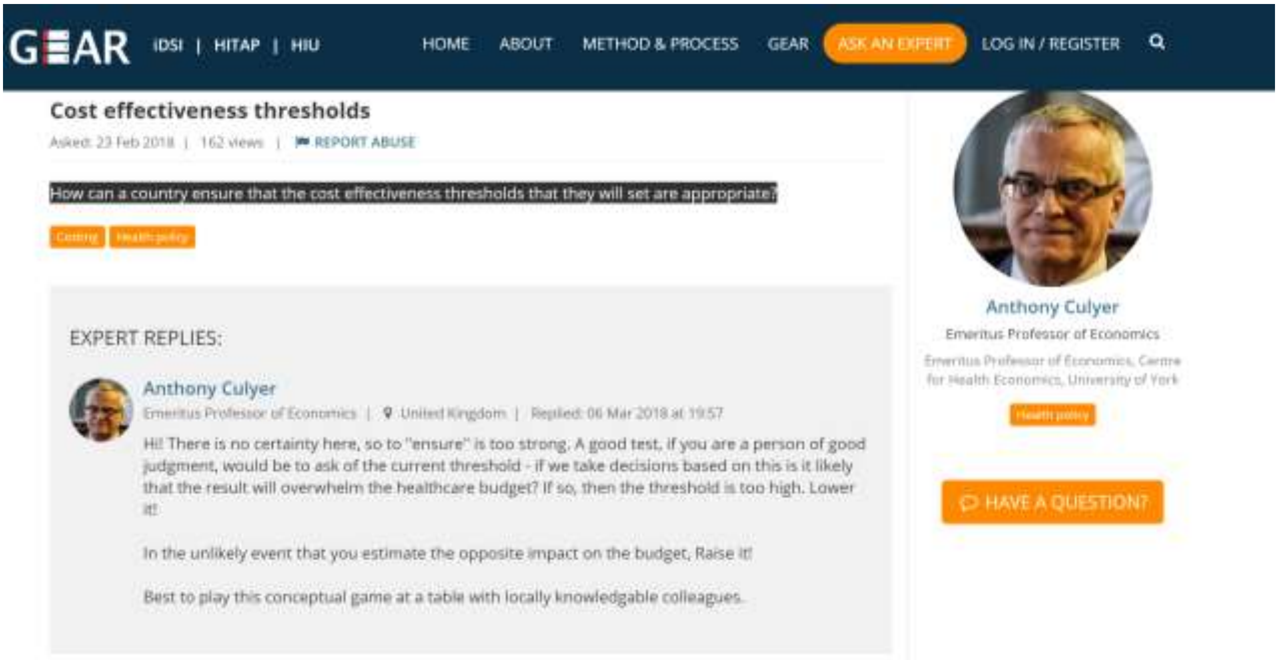
NCDs-related cost-per-DALY studies from the GH CEA Registry (Neumann et al 2018)





Questions to be asked when thinking about the CE threshold

- Why the CE threshold is needed given the decision making context?
- Have legitimate stakeholders been involved in the determination of the CE threshold and its implementation?
- What kinds of impact, economic or others, are not considered when using the CE threshold and why? Can we improve the analysis and/or decision making process?
- Is the use of the CE threshold help decision makers gaining desirable outcome in making coverage decisions?
- When and how to update the CE threshold?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Cost effectiveness thresholds
Asked: 23 Feb 2018 | 162 views | REPORT ABUSE
How can a country ensure that the cost effectiveness thresholds that they will set are appropriate?
Costing
Health policy
EXPERT REPLIES:
Anthony Culyer
Emeritus Professor of Economics | United Kingdom | Replied: 06 Mar 2018 at 19:57
Hi! There is no certainty here, so to "ensure" is too strong. A good test, if you are a person of good judgment, would be to ask of the current threshold - if we take decisions based on this is it likely that the result will overwhelm the healthcare budget? If so, then the threshold is too high. Lower it!
In the unlikely event that you estimate the opposite impact on the budget, Raise it!
Best to play this conceptual game at a table with locally knowledgable colleagues.
Anthony Culyer
Emeritus Professor of Economics
Emeritus Professor of Economics, Centre for Health Economics, University of York
Health policy
HAVE A QUESTION?

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