Why is MCDA useful?

Using MCDA for making healthcare coverage decisions in Thailand

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Outline

- The challenges in using cost-effectiveness analysis to inform resource allocation
- Using MCDA to incorporate 'social values'
- Thailand's experience in using MCDA in UHC benefit package development
- Lessons learned for Japan and other countries

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Two sides of the same coin?

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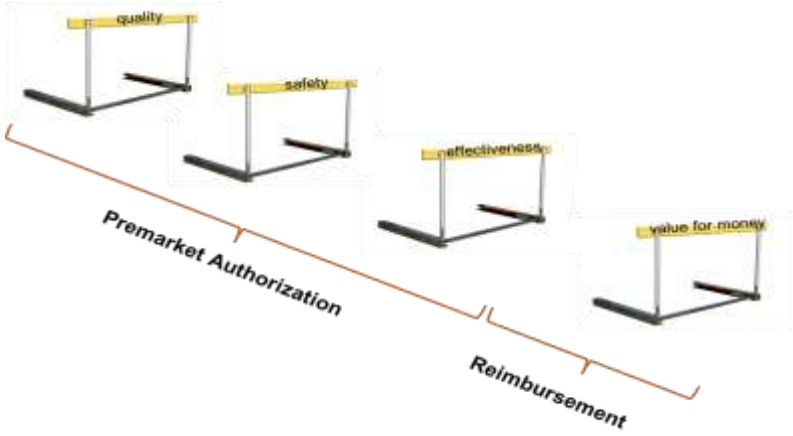
The increasing interest in using value for money for making coverage decision



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Is a QALY a QALY?

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If only one organ available for transplantation and you have to manage it.
You will……

A: Give to 20 year- old

B: Give to 60 year- old

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If only one organ available for transplantation and you have to manage it. You will……

A: Give to 20 year- old who are drug addicted and murder

B: Give to 60 year- old who are a university professor

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If only one organ available for transplantation and you have to manage it. You will……

A: Give to 20 year-old with no dependence

B: Give to 30 year-old female with a baby

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If only one organ available for transplantation and you have to manage it. You will……

A: Give to 30 year- very rich

B: Give to 30 year- very poor

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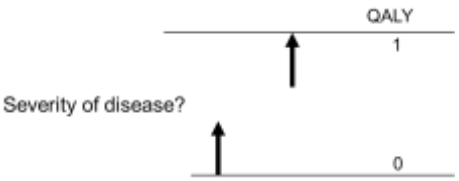
Social value in health policy

- Population characteristics e.g. age, gender, education, social status etc.
- Disease severity
- Equity
- Others…..



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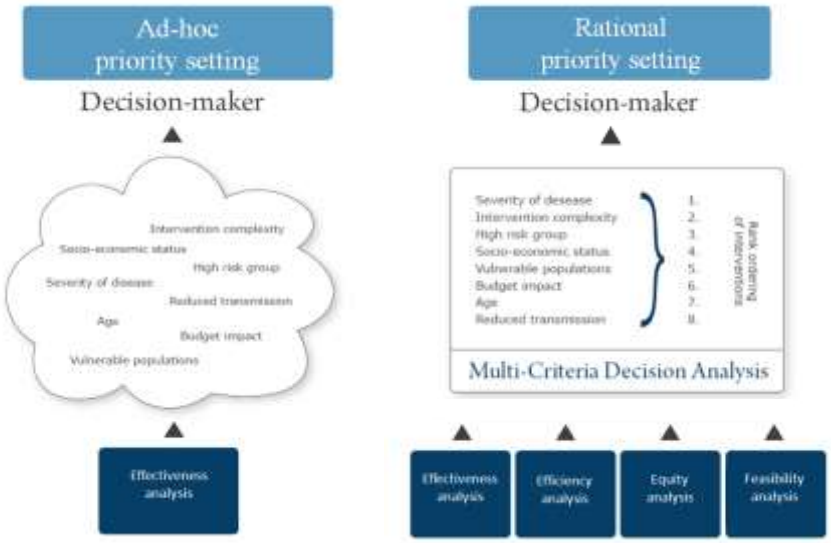
MCDA is an aid to decision making which makes the impact of multiple criteria on decisions more explicit, and the relative importance attached to them



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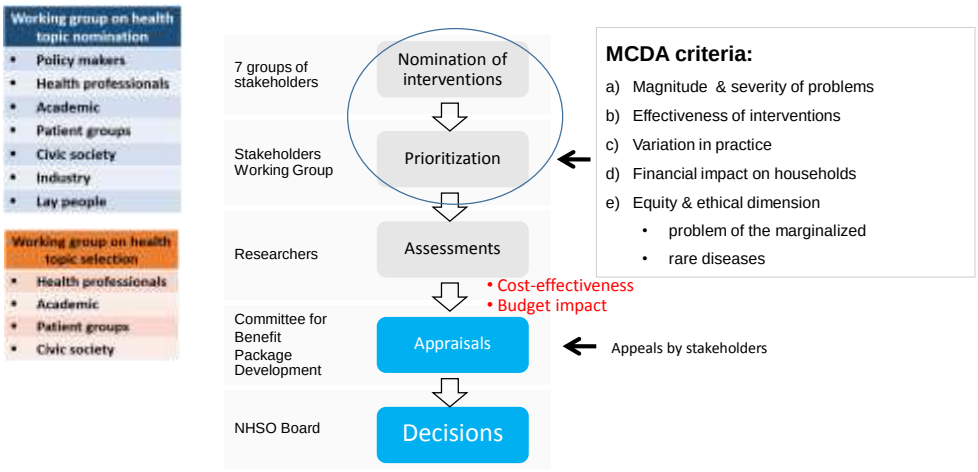
This slide is adapted from the presentations Prof. Rob Baltussen

UHC benefit package development

Participatory-Transparent-Evidence-based-Contestable



Youngkong S, Baltussen R, Tantivess S, Mohara A, Teerawattananon Y. Multicriteria decision analysis for including health interventions in the universal health coverage benefit package in Thailand. Value Health. 2012;15(6):961-70

Mohara A, Youngkong S, Pérez Velasco R, Werayingyong P, Pachanee K, Prakongsai P, Tantivess S, Tangcharoensathien V, Lertiendumrong J, Jongudomsuk P, Teerawattananon Y. Using health technology assessment for informing coverage decisions in Thailand. J Compar Effect Res 2012;1(2):137-46

Prioritization

Scoring for topic selection

Topic no.	Magnitude of problems	Severity of problems	Effectiveness	Variation in practice	Financial impact on household	Equity & ethical dimension	Total score
1	5	2	5	4	1	3	20
2	5	5	4-5	2	1	1	18-19
3	5	1-4	4	2	1	1	14-17
4	3	2-5	4	1	1	1	12-15
5	5	2	1	2	1	1	12
6	1	4	2	2	5	4	18
7	1	5	4	2	5	2	19
8	5	1-3	5	2	1-2	3	17-20
9	2	4	4	1	4	3	18

Topics for conducting HTA studies

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Using economic evaluation for UHC benefit package development

Health Interventions	Comparators	Baht/QALY (2009)	Coverage decisions
AZT+3TC+LPV/r for PMTCT	AZT plus single dose NVP	cost-saving	Yes
Dental implant	conventional complete denture	51,000	No
Provider-initiated HIV testing	Voluntary HIV counseling-testing	70,000	Yes
Bone marrow transplantation for thalassemia	Blood transfusion	120,000	Yes
HLA-B*1502 in neuropathic pain patient	**No screening**	**120,000**	**Yes**
HLA-B*1502 in patients with epilepsy	**No screening**	**200,000**	**Yes**
HPV vaccine for girls aged 15 years	Pap smear q 5 years aged 35-60	247,000	No
Alendronate or Residronate for osteoporosis	calcium + vitamin D	2-400 ,000	No
Cochlear implantation for profoundly deaf	training hand language	400,000	No
Fordable lens for cataract	Rigid intraoccular lens	507,000	No
Atorvastatin in pop ≥30% CVD risk	exercise & diet control	600,000	No
Peritoneal dialysis for ESRD	**palliative care**	**435,000**	**Yes**
Hemodialysis for ESRD	palliative care	449,000	Yes
Erythropoitin for anemia in cancer	blood transfusion	2,700,000	No

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Lessons learned

- MCDA can improve
  - Quality of decisions by addressing all relevant criteria
  - Transparency of decisions by being explicit
  - Consistency of decisions by using same principles over time

  -> Legitimacy of decisions
- MCDA is not only about the technical content but also process e.g. participatory, transparency, timeliness etc.
- Country jurisdiction needs to find locally relevant MCDA approach e.g. MCDA can be applied in many steps of policy process

"Making policy is difficult and there is more to policy than evidence"

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Criteria used in selection of topics

A consultation panel among policy makers and academics

- Establishing the definition and measurement
- Scoring system by six criteria
- Ordinal scale from 1 to 5
- Equal weight

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Criteria	Definition	Parameter	Scoring
1. Size of population affected by disease	Number of people affected by the disease or health problem that is treated or prevented by the proposed intervention among Thai population at a specified time	Prevalence	5 = >500,000 4 = 100,001–500,000 3 = 50,001–100,000 2 = 10,001–50,000 1 = ≤10,000
2. Severity of disease	Severity of disease or health problem that is treated or prevented by the proposed intervention by considering its impact on the patients' QOL	QOL score	5 = >0.60 4 = 0.41–0.60 3 = 0.21–0.40 2 = 0.01–0.20 1 = ≤0

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3. Effectiveness of health intervention	The final outcomes of the proposed intervention that benefit the patients with regard to the objective of the intervention		
	3.1 For treatment/rehabilitation: Capacity of the proposed intervention to treat or rehabilitate the patients from the disease and its impact on the patients' QOL	The clinical benefit of the proposed intervention and improvement in QOL	5 = cure 4 = prolong life and major improvement in QOL 3 = prolong life and minor improvement in QOL 2 = major improvement in QOL 1 = minor improvement in QOL
	3.2 For screening/diagnostic: Quality of the proposed intervention to screen or diagnose the disease of the patients and the expected outcome beyond the screening or diagnostic	Accuracy of the intervention and whether the screened disease could be cured	5 = accuracy >80% and screened disease could be cured 4 = accuracy 60%–80% and screened disease could be cured 3 = accuracy >80% but screened disease could not be cured 2 = accuracy 60%–80% and screened disease could not be cured or accuracy <60% and screened disease could be cured 1 = accuracy <60% and screened disease could be cured
	3.3 For prevention: Risk reduction or preventive capacity provided by the proposed intervention to the population	Effectiveness of the intervention to prevent the disease	5 = >90% 4 = 81%–90% 3 = 71%–80% 2 = 61%–70% 1 = ≤60%

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4. Variation in practice	Variation of implementing the intervention in practice that leads to unequal accessibility to the intervention among Thais. Variation in practice could be identified from the different coverage of the three publicly funded health insurance schemes in Thailand and/or could be identified from the different distribution of the intervention throughout the country	The difference of the benefit packages between the three health insurance schemes in Thailand The difference of health interventions distribution	5 = national evidence presenting variation in practice in Thailand 4 = national evidence presenting variation in practice in some areas 3 = international evidence presenting variation in practice in other countries that could assume there is variation in practice in Thailand 2 = no evidence but we could assume there is variation in practice in Thailand 1 = no variation in practice
5. Economic impact on household expenditure	Impact on household expenditure as a consequence of providing health intervention to a family member with consideration of catastrophic illness or health catastrophe	Direct medical and nonmedical household expenditure as a consequence of the disease or health problem per year	5 = >62,500 baht/y 4 = 35,601–62,500 baht/y 3 = 20,801–35,600 baht/y 2 = 12,000–20,800 baht/y 1 = <12,000 baht/y
6. Equity/ethical and social implication	Priorities for specific groups of patients, i.e., the poor with rare disease, reflect the moral values that should be considered by policymakers	Disease of the poor Prevalence <1,000 (rare disease)	5 = targeting the poor and prevalence <1,000 4 = targeting the poor and prevalence 1,000–10,000 3 = targeting the poor and prevalence >10,000 2 = not targeting the poor and prevalence <1,000 or not targeting the poor and prevalence 1,000–10,000 1 = not targeting the poor and prevalence >10,000

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