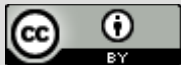# WP7: Methodological tools using multi-criteria value methods for HTA decision-making

Mónica Oliveira, Panos Kanavos, Aris Angelis

IMPACT HTA Final Workshop
8 June 2021

IMPACT HTA

WP7 Research design and objectives

Task 1: Framework on determinants of HTA recommendations

- ✓ Advanced econometric techniques to understand determinants of HTA coverage across therapeutic classes and jurisdictions.
- ✓ Qualitative assessment based on direct feedback from HTA agencies and health insurers

Task 2: Multi-criteria evaluation framework

- ✓ Adaptable and flexible multi-criteria models within a common value framework (for different drugs/diseases)
- ✓ Workshops, web-Delphi panels involving 250-500 stakeholders to discuss key issues
- ✓ Methods and techniques to enable model building

Task 3: Testing the framework with empirical applications

- ✓ Case studies to build evaluation models in HTA agencies (2-3 disease-specific)
- ✓ Combining Delphi processes with decision conferences for building evaluation models

Task 4: Recommendations for resource allocation

- ✓ Discussing the use of tools and models for improved resource allocation and to inform coverage recommendations and pricing decisions

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Task 1: Key methods and results
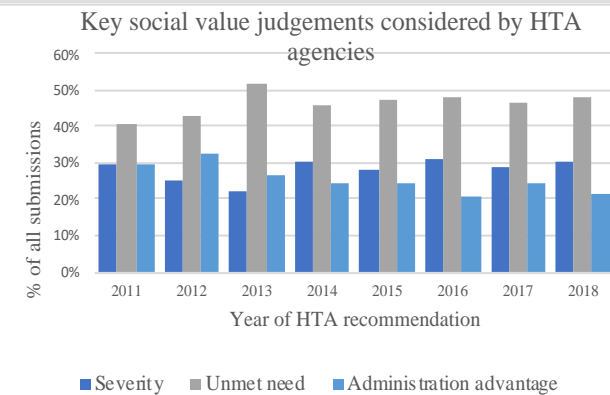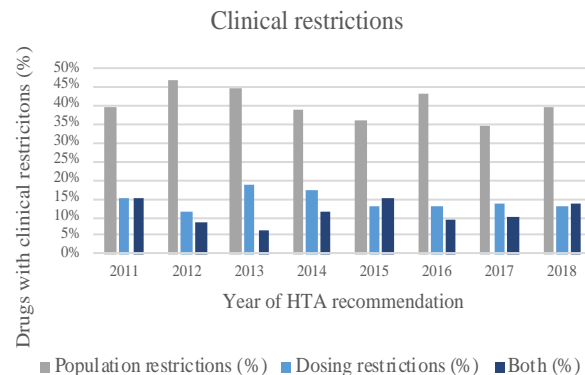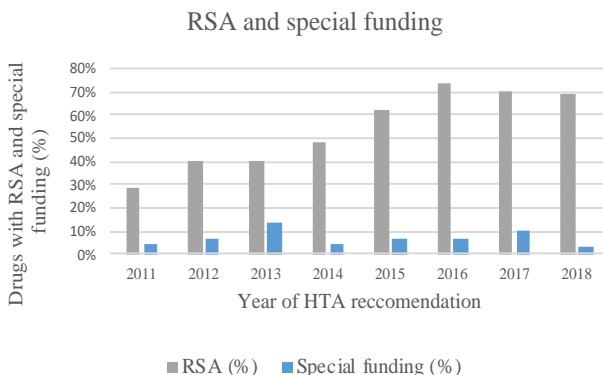
- Development of a model studying the factors associated with HTA coverage decisions; model captures different groups of factors:
  - Drug type
  - Clinical and economic evidence
  - Funding type
  - Quality of evidence
  - Clinical uncertainties
  - Economic uncertainties
  - Social value judgements
  - Country- and time-specific variables

Country (agency)	List (L)	List with criteria (LWC)	Do Not List (DNL)	Original sample size
Canada (CADTH)	9	159	29	219
France (HAS)	32	156	12	219
Quebec (INESSS)	24	98	66	219
Germany (G-BA)	44	103	1	219
England (NICE)	14	123	10	219
Australia (PBAC)	5	141	36	219
Scotland (SMC)	46	133	18	219
Sweden (TLV)	60	85	11	219
Total	231	1,004	180	1,752

- Testing of the model in 8 jurisdictions involving a representative panel of 219 drug-indication pairs
- Model confirms that clinical and economic dimensions are significantly associated with coverage; uncertainties have a negative effect on coverage decisions, while certain social value judgements are positively and significantly associated with coverage decisions and can act as decision modifiers; the model informs Tasks 2 & 3

RSA and special funding

Clinical restrictions

Key social value judgements considered by HTA agencies
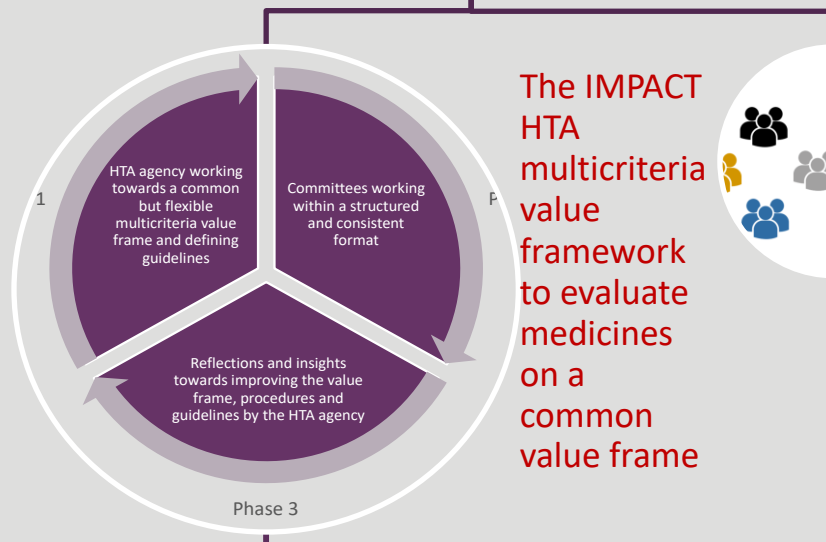
Task 2: Key methods and results

HTA agency:
I. Consensualizing value aspects with large number of HTA agency stakeholders
II. Setting relevance of value aspects across therapeutic indications
III. Setting guidelines for committees' work

HTA committee:
I. Departing from the value frame set by the agency
II. Working under structured formats, using Delphi and decision conferencing processes

Actionable tools to assist HTA agencies in the evaluation of medicines

HTA agency working towards a common but flexible multicriteria value frame and defining guidelines

Committees working within a structured and consistent format

Reflections and insights towards improving the value frame, procedures and guidelines by the HTA agency

1

Phase 3

The IMPACT HTA multicriteria value framework to evaluate medicines on a common value frame

Who's in and who's out: An analytical framework for stakeholders' roles and involvement in HTA

Designed Delphi and decision conferencing processes and technical tools for engaging HTA stakeholders in collaborative value modelling

Industry PANEL (29) 19%

HTA bodies PANEL (18) 18%

Scientific experts PANEL (38) 25%

Total number of participants that completed the second round n=153

Payers and policy-makers PANEL (18) 12%

Patients and careers PANEL (19) 12%

Healthcare professionals PANEL (21) 14%

Tested the framework with a large number of HTA agency stakeholders (approx. 170)

Could understand differences in opinion about relevant value aspects to evaluate medicines across HTA stakeholder groups

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Task 2: Key methods and results

Actionable tools to assist HTA agencies in the evaluation of medicines

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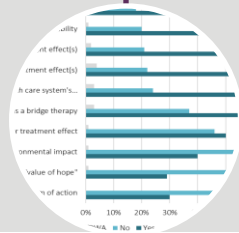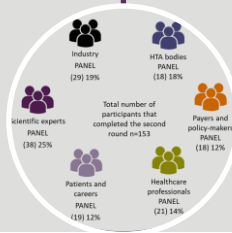
Who's in and who's out: An analytical framework for stakeholders' roles and involvement in HTA

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Task 3: key methods and results

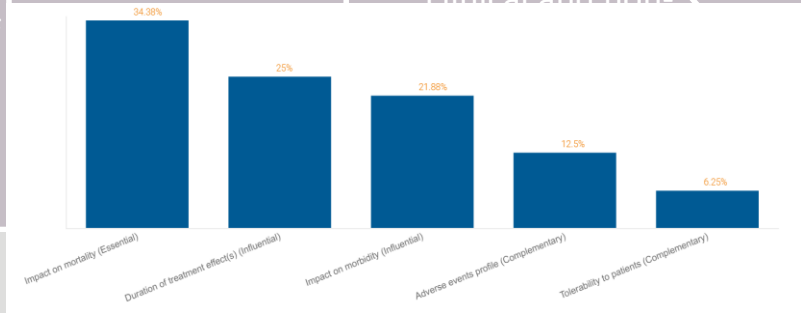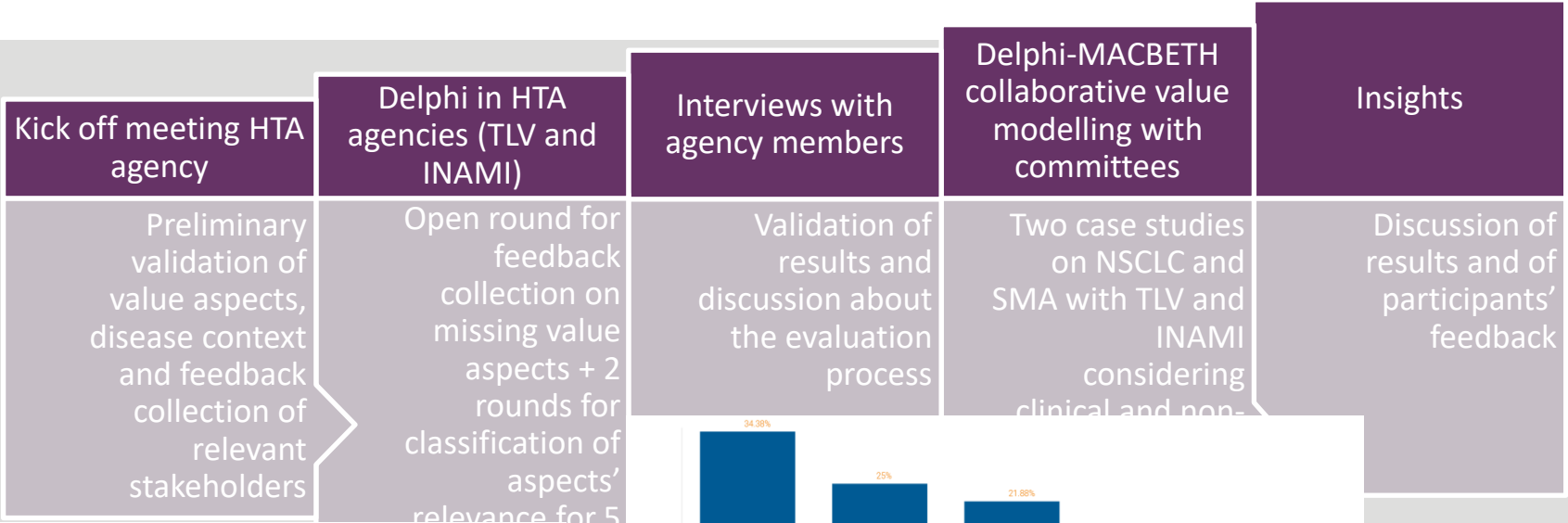| Kick off meeting HTA agency	Delphi in HTA agencies (TLV and INAMI)	Interviews with agency members	Delphi-MACBETH collaborative value modelling with committees	Insights
Preliminary validation of value aspects, disease context and feedback collection of relevant stakeholders	Open round for feedback collection on missing value aspects + 2 rounds for classification of aspects' relevance for 5 areas	Validation of results and discussion about the evaluation process	Two case studies on NSCLC and SMA with TLV and INAMI considering clinical and non-	Discussion of results and of participants' feedback

IMPACT-HTA Value Framework criteria	Disease 1	Disease 2
A - Severity of the disease		
B - Unmet need of the disease		
C - Medicine's impact on mortality		
D - Medicine's impact on morbidity		
E - Medicine's impact on health-related quality of life		
F - Medicine's adverse events profile		
G - Medicine's tolerability to patients		
H - Medicine's ease and convenience for patients		
I - Medicine's impact on wider public health in terms of disease risk reduction in the community		
J - Medicine's economic impact		
K - Medicine's affordability		
L - Medicine's efficiency		
M - Risk of bias due to flaws in the design, conduct, analyses and reporting of the medicine's clinical trials		
N - Impact of the medicine's adoption on the health care system's organisation and delivery of care		
O - Impact of the medicine's adoption on equity and ethical issues		
P - Medicine's value as a bridge therapy		
Q - Medicines' impact on patient functionality		
R - Medicine's time for treatment effect		
S - Medicine's duration of treatment effect(s)		
T - Medicine's duration of adverse/unwanted treatment effect(s)		
U - Disease frequency (e.g. rarity)		
V - Medicine's spill-over effects		
W - Medicine's mechanism of action		

Bar chart values:
- Impact on mortality (Essential): 34.38%
- Duration of treatment effect(s) (Influential): 25%
- Impact on morbidity (Influential): 21.88%
- Adverse events profile (Complementary): 12.5%
- Tolerability to patients (Complementary): 6.25%

		Nivolumab	Pembrolizumab	Atezolizumab	Docetaxel
		#1	#3	#2	#4
CLINICAL VALUE ASPECTS		100	64.77	67.61	0
Impact on mortality (Essential)	0.14	100	100	100	0
Impact on morbidity (Essential)	0.14	100	100	25	0
Duration of treatment effect(s) (Essential)	0.23	100	25	62.5	0
Adverse events profile (Essential)	0.36	100	50	62.5	0
Tolerability to patients (Essential)	0.14	100	100	100	0

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Impacts & Future Research

Impacts of WP7 results:

- Produced a comprehensive model capturing factors associated with HTA coverage decisions
- Produced novel IMPACT HTA Value Framework and tools to enable the evaluation of distinct medicines by HTA agencies on multiple dimensions but within a common value frame
  - Framework tested with a large number of HTA agency stakeholders, with two HTA agencies (TLV and INAMI), and with four HTA committees
  - Novel Delphi and decision conferencing processes, within collaborative value model frame
- New framework to assist HTA agencies in identifying and understanding the role of their stakeholders
- Key contributions to MCDA in HTA literature

Future Research:

- Testing the framework in other contexts (country- and disease-specific)
- Building tools to enable a more expeditious implementation of the framework

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Thank You For Your Attention!

IST Team:

Mónica Oliveira

Mail: monica.oliveira@tecnico.ulisboa.pt

Carlos Bana e Costa

Mail: carlosbana@tecnico.ulisboa.pt

Ana Vieira

Mail: ana.lopes.vieira@tecnico.ulisboa.pt

Klára Dimitrovová

Mail: klara.dimitrovova@tecnico.ulisboa.pt

LSE Team:

Panos Kanavos

Mail: p.g.kanavos@lse.ac.uk

Aris Angelis

Mail: A.N.Angelis@lse.ac.uk

Erica Visintin

Mail: e.visintin@lse.ac.uk

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