A Roadmap to the Use of Value of Information Analysis in Health Technology Assessment: An International Study of Barriers, Facilitators, and Potential Applications

HTA224

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Background & Aim

- Value of information (VOI) analyses can help policy-makers make more informed decisions about whether to conduct and how to design future studies.
- Despite its significance, VOI remains underutilized by Health Technology Assessment (HTA) agencies worldwide.
- **To provide an overview of the potential applications and barriers to the integration of VOI within HTA processes across diverse jurisdictions and develop recommendations on how to integrate VOI in HTA processes**

Methods

- **The Collaborative Network for Value of Information (ConVOI)** is an i**nternational group of researchers** with interests in VOI **application** and method development.
- Comprehensive mapping of HTA processes across several jurisdictions, including Australia, Canada, England & Wales, the Netherlands, and Norway in **four steps**:

i. **Scoping review** on barriers and recommendations for the use of VOI in practice

ii. **Development** of a **questionnaire** through collaboration with ConVOI members

iii. Completion of **questionnaires:** publicly available information, own experience and consultations with HTA agencies

iv. Through a **workshop and member checks**, we compared processes and barriers and facilitators in each and developed recommendations.

Mapping HTA processes

	Australia: Federal Department of Health, HTA unit, Pharmaceutical Benefits Scheme	Canada: Canadian Agency for Drugs and Technologies in Health	England & Wales: NICE STAs	England & Wales: NICE Guidelines	Netherlands: National Health Care Institute	Norway: Norwegian Directorate for Medical Products
Appraisal	PBAC outcome advice to sponsor (one-off)	Deliberation by committees (one-off)	NICE committee meeting (s), multiple possible	NICE committee meeting (s), multiple possible, not binding	WAR committee meeting(s), multiple possible, and ACP committee meeting	Decision Forum, Directorate for Medical Products
Input from stakeholder / patient groups	Yes	Yes	Yes	Yes	Yes	Sometimes
Mandate	Minister or Cabinet	Minister of Health and Health Care & provincial ministers	NICE (guidelines produced)	NICE (guidelines produced)	Ministry of Health	Decision Forum for hospital drugs*, Directorate for Medical Products**, Norwegian Parliament***
Formal research recommendation	Yes, but not linked to funding	Not linked to research funding body	CDF/IMF linked to funding	Yes, but not linked to funding and non-binding	Can be made in special cases, non-binding, not linked to funding	None
Price negotiations	Ministry of Health	Pan-Canadian Pharmaceutical Alliance	NHS	NHS	Ministry of Health	Norwegian Hospital Procurement Trust
Timeline	18 weeks (from receipt of submission	26 weeks (from the receipt of submission)	60 weeks (from the process scoping)	100-130 weeks (from the process scoping)	17 weeks (from the receipt of submission)	26 weeks (from the receipt of submission)
Uncertainty analysis	1) PA not required / recommended; 2) VOI not required / recommended	1) PA required; 2) VOI recommended but not used	1) PA not required / recommended; 2) VOI not required / recommended	1) PA not required / recommended; 2) VOI not required / recommended	1) PA required; 2) VOI required	1) PA not required; 2) VOI not required / recommended

*Hospital drugs, **chronic-condition drugs with annual budget of < NOK100m in year 5, ***chronic-condition drugs with annual budget of > NOK100m in year 5

Recommendations for VOI implementation in HTA processes

	VOI use case		
Recommendations	**1) Risk assessment**	**2) Identify risk drivers**	**3) Evaluation of (ongoing or new) research**
Knowledge of VOI			
Create awareness, engagement with stakeholders	X	X	X
Training for HTA agency, committees, evaluation groups, industry	X	X	X
Real world case studies on how VOI informed policy decisions	X		X
Pilot studies per jurisdiction to explore usefulness and feasibility	X	X	X
Appropriate process			
Inclusion in guidelines for economic evaluations (mandatory)	X	X	X
Time / resources for EVPI at alternative prices	X		X
Time / resources for EVPPI with different assumptions		X	X
Time / resources for EVSI			X
Multiple committee meetings, with sufficient time in between			X
Time for discussion of research in committee meetings (agenda)			X
Potential for reassessment			X
Collaborative process with clear roles	X	X	X
'Rapid framework' for assessing managed access schemes			X
A guide to prioritization: when is (what) VOI analysis needed?	X	X	X
Set up CED schemes			
Collaboration with research commissioners			X
Collaboration with manufacturers			X
Ability to make research mandatory			X
Guidance for effective communication of VOI results	X	X	X

Conclusions

- **VOI** has a significant potential to **improve** decision-making about the **reimbursement** and **implementation** of new health technologies.
- Our study assessed the current use of VOI in **five jurisdictions** in different continents and found that currently, **the Netherlands** is the **only** country that **requires VOI** in their HTA guidelines.
- The analysis shows that VOI analysis should be feasible, especially for the purposes of risk assessment and identifying risk drivers.
- The **ConVOI recommendations** provided in this study have the potential to **facilitate** the practical **implementation** of **VOI**

Abbreviations: CDF: Cancer Drugs Fund, CED: coverage with evidence development, EVPI: expected value of information, EVPPI: parameter EVPI, EVSI: expected value of sample information, HTA: health technology assessment, IMF: Innovative Medicines Fund, PA: probabilistic analysis, NICE: National Institute for Health and Care Excellence, NHS: national health service, STA: single technology appraisal, VOI: value of information

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