

Value and health technology assessment: transparency in use of peer-reviewed publications

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BACKGROUND

- Value and health technology assessment (V/HTA) are tools used in health care decision-making
- V/HTA bodies in Canada and Europe, and value assessment organizations in the United States engage in V/HTA to inform clinical, coverage, and reimbursement decisions
- Transparency in the assessment processes for and selection of data sources used in V/HTA is necessary for ethical and accountable decision-making
- Peer review is one mechanism for, and perhaps considered the most important factor in, judging the quality and trustworthiness of research

OBJECTIVE

To identify publicly available methods requirements regarding inclusion of peer-reviewed publications by the most widely encountered V/HTA organizations.

METHODS

- Eleven V/HTA organizations were chosen as the most commonly referenced organizations in recent discussions regarding V/HTA in North America and Europe (Table 1).
- US entities chosen were those cited in a recent in-depth review of US value frameworks.⁴ Ex-US organizations were selected based on volume of Google search-result mentions.
- Publicly available documents were obtained, abstracted and analyzed for the 11 organizations (7 United States, 1 Canada, 3 Europe)
- A standardized data abstraction form in Microsoft Excel was used to systematically abstract information on methodology processes and data-source selection with regard to peer-review publication. Data were qualitatively and quantitatively synthesized
- Two reviewers independently abstracted data for each document, their data were compared for reliability, and a third reviewer served as tie-breaker when needed
- Table 2 includes data abstraction definitions used by reviewers

RESULTS

Table 1. Value framework and health technology assessment methods documentation requirements on data sources							
Organization	Country/ Organization Type	Specifies literature search strategy*	Specifies data sources*	Provides guidance on data extraction*	Explicitly references peer-reviewed literature*	Accepts grey literature*	Accepts proprietary data*
Value Assessment Organizations							
American College of Cardiology / American Heart Association (ACC)	 CL	Yes	No	No	No	No	No
American Society of Clinical Oncology (ASCO)	 CL	No	No	No	Yes	No	No
Avalere/FasterCures (A/FC)	 NP	No	No	No	Yes	No	No
Innovation and Value Initiative (IVI)	 NP	Yes	Yes	No	No	No	No
Institute for Clinical Economic Review (ICER)	 NP	Yes	Yes	Yes	Yes	Yes	Yes
Memorial Sloan Kettering Cancer Center (MSK)	 CL	No	No	No	No	UA	No
National Comprehensive Cancer Network (NCCN)	 CL	UA	No	No	No	No	No
Health Technology Assessment Organizations							
Canadian Agency for Drugs and Technologies in Health (CADTH)	 GOV	Yes	Yes	Yes	No	Yes	Yes
Haute Autorité de Santé (HAS)	 GOV	Yes	Yes	Yes	No	Yes	Yes
Institute for Quality and Efficiency in Health Care (IQWiG)	 GOV	Yes	Yes	No	No	Yes	Yes
National Institute for Health and Care Excellence (NICE)	 GOV	Yes	No	No	No	Yes	Yes
*See Table 2 for definition CL = clinical/professional organization; GOV = government; NP = non-profit; UA = unable to determine.							

Table 2. Term definitions

Term	Definition
Specifies literature search strategy	Description of or recommendations for approach to conducting the literature search; may specifically include preferred databases (e.g., Medline, EMBASE), time frame, selection criteria, etc.
Specifies data sources	Description of data sources used, such as peer-reviewed literature, manufacturer submission, reports authored by other HTA agencies
Provides guidance on data extraction	Provides instructions on development of a data extraction process or provision of a data extraction form template
Explicitly references peer-reviewed literature	Specific mention of literature that is peer-reviewed as part of methods related to the selection or inclusion of evidence
Accepts grey literature	Specific mention of grey literature inclusion criteria, consideration, and/or other circumstances in which grey literature may/should be considered
Accepts proprietary data (may be confidential, is often unpublished)	Specific mention of access to or use of confidential data, proprietary data, or other unpublished information provided by a manufacturer(s); may describe what kind of evidence is considered confidential or proprietary

KEY FINDINGS

- There is inconsistency between organizations in including guidance on literature-search strategy (7 of 11) and few explicitly reference use of peer-reviewed literature (3 of 11) to source data.
- There are noted differences between US and non-US approaches, possibly due to longevity/ experience, with non-US organizations providing more guidance in general.
- The US organizations reviewed were more likely to explicitly reference use of peer-reviewed literature than ex-US organizations.
- CADTH, HAS, IQWiG, and NICE were more likely to accept data from grey-literature sources, than US-based organizations. Only ICER stated it accepted grey literature.
- Nearly half the organizations (5 of 11) allow the use of proprietary, manufacturer-provided data that was often not publicly accessible; most (4 of 5) were non-US based.
- Reviewers commented that specificity and depth of guidance in methods documentation varied widely.
- Reviewers commented that, in general, they noted heterogeneity in methods among US-based organizations but more similarity in methods among non-US-based organizations.

STUDY LIMITATIONS

- Some publicly available methods documents may not have been captured because they were not identified in the search.
- Non-English language materials may not have been translated accurately/comprehensively enough?
- Heterogeneity in each organizations' purpose, methods, structure, and formats made direct comparisons challenging.

CONCLUSIONS

Scant guidance for V/HTA organizations regarding data searches, data requirements, use of peer-reviewed sources, and use of publicly available sources of data makes transparency, replicability, and judging data-source quality tenuous. Standardization among established V/HTA organizations in recommendations regarding use of peer-reviewed sources could help improve V/HTA transparency and subsequent evidence-based decision-making.

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