

Epidemiology of methodological guidance of health technology assessment agencies

Dawid Pieper

Institute for Research in Operative Medicine (IFOM)
Witten/Herdecke University, Campus Cologne
Ostmerheimer Str. 200, 51109 Cologne
Germany



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RESEARCH ARTICLE

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Methods of international health technology assessment agencies for economic evaluations- a comparative analysis

Tim Mathes^{*}, Esther Jacobs, Jana-Carina Morfeld and Dawid Pieper



Institut für Forschung in der
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Methods for Systematic Reviews of Health Economic Evaluations: A Systematic Review, Comparison, and Synthesis of Method Literature

Tim Mathes, Maren Walgenbach, Dr., Sunya-Lee Antoine,
Dawid Pieper, Michaela Eikermann, Dr.

Introduction. The quality of systematic reviews of health economic evaluations (SR-HE) is often limited because of methodological shortcomings. One reason for this poor quality is that there are no established standards for the preparation of SR-HE. The objective of this study is to compare existing methods and suggest best practices for the preparation of SR-HE. **Methods.** To identify the relevant methodological literature on SR-HE, a systematic literature search was performed in Embase, Medline, the National Health System Economic Evaluation Database, the Health Technology Assessment Database, and the Cochrane methodology register, and webpages of international health technology assessment agencies were searched. The study selection was performed independently by 2 reviewers. Data were extracted by one reviewer and verified by a second reviewer. On the basis of the overlaps in the recommendations for the methods of SR-HE in the included papers, suggestions for best practices for the preparation of SR-HE were

developed. **Results.** Nineteen relevant publications were identified. The recommendations within them often differed. However, for most process steps there was some overlap between recommendations for the methods of preparation. The overlaps were taken as basis on which to develop suggestions for the following process steps of preparation: defining the research question, developing eligibility criteria, conducting a literature search, selecting studies, assessing the methodological study quality, assessing transferability, and synthesizing data. **Discussion.** The differences in the proposed recommendations are not always explainable by the focus on certain evaluation types, target audiences, or integration in the decision process. Currently, there seem to be no standard methods for the preparation of SR-HE. The suggestions presented here can contribute to the harmonization of methods for the preparation of SR-HE. **Key words:** economic evaluations; costs; cost analysis; systematic reviews; methods. (*Med Decis Making* 2014;34:826–840)



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Methodological approaches in conducting overviews: current state in HTA agencies

**Dawid Pieper,* Sunya-Lee Antoine, Jana-Carina Morfeld,
Tim Mathes and Michaela Eikermann**



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Methods

HEALTH TECHNOLOGY ASSESSMENT OF PUBLIC HEALTH INTERVENTIONS: A SYNTHESIS OF METHODOLOGICAL GUIDANCE

Tim Mathes
Institute for Research in Operative Medicine
tim.mathes@uni-wh.de

Sunya-Lee Antoine
Peggy Prengel
Stefanie Böhn
Stephanie Polus
Dawid Pieper
Institute for Research in Operative Medicine

Objectives: The evaluation of public health interventions poses some challenges. As a consequence, health technology assessment (HTA) methods for public health interventions (PHI) have to be adapted. This study aimed to summarize the available guidance on methods for HTA of PHI.

Methods: We systematically searched for methodological guidance on HTA of PHIs. Our focus was on research synthesis methods to evaluate effectiveness. Relevant information was synthesized narratively in a standardized way.

Results: Only four guidance documents were identified specifically for HTAs of PHI. The approaches used for HTAs of PHIs are broader and more flexible than those for medical interventions. For this reason, there is a tendency to identify the intervention components and context factors that influence the effectiveness and transferability of an intervention rather than to assess its effectiveness in general. The details in the guidance vary without justification. Unjustified heterogeneity between the different guidance approaches is most pronounced for quality assessment, assessment of applicability, and methods to integrate qualitative and quantitative evidence. Descriptions for the assessment of integrity, heterogeneity, sustainability, context factors, and applicability are often vague.

Conclusions: The heterogeneity in approaches indicates that there is currently no consensus on methods to deal with the challenges of the PHI evaluations. A possible explanation for this may be that the methods are not sufficiently developed, and advantages and disadvantages of a certain method in relation to the research question (e.g., broad/focused) have not yet been sufficiently evaluated.

Keywords: HTA, Public health, Health promotion, Evidence synthesis

- Dealing with methodological guidance of HTA agencies in various settings
 - economic evaluations (2013)
 - systematic reviews of health economic evaluations (2014)
 - overviews (reviews of reviews) (2014)
 - public health interventions (2017)
- ~~task: general overview of HTA agencies and their methods of HTA~~
- not feasible! Why?



HTA agencies

- ~ 200 countries worldwide
- ~ 135 HTA agencies
- based on member lists of
 - International Network of Agencies for Health Technology Assessment (INAHTA)
 - Health Technology Assessment International (HTAi)
 - European Network for Health Technology Assessment (EUnetHTA)
- Institutions working in the field of HTA, but no real (national/regional) HTA agencies
- unknown HTA agencies (unlikely for OECD countries)
- CAVE #1: HTA agency is ill-defined



approx. 135 HTA agencies

approx. 100 guidance
documents

>40 HTA agencies with ≥ 1
document



- mainly from OECD countries
- Pages: range 5-646 (median 73.5)
- Publication dates: range 1996-2014 (median 2009)
- 12 updated guidance documents (by 7 HTA agencies) since 2012
- own guidance vs. relying on other guidance while pointing out differences
- one document vs. multiple documents
- CAVE #2: „methodological guidance“ is ill-defined!



Table 1: Remit and Scope of each NICE HTA programme

	Technology Appraisal Programme	Medical Technologies Guidance	Diagnostics Assessment Programme	Highly Specialised Technology Programme	Clinical Guidelines
What is appraised?	Medicines, medical devices, diagnostics, surgical procedures, therapeutic technologies, systems of care, screening tools.	Medical devices (active, active implantable, in vitro), genetic tests.	Diagnostic technologies/ tests, genetic tests.	Drugs for very rare conditions.	Condition specific care and services.
Referral	Primarily HSRIC; Formal referral required from Secretary of State for Health.	Primarily product sponsors; Also HSRIC.	Product sponsors, national clinical directors, medical royal colleges, professional bodies, national expert bodies, or HSRIC.	Primarily HSRIC; Formal referral required from DH.	Topic oversight group.
Selection/ routing	Must have been granted, or be soon to receive, marketing authorisation; Significant benefit to patients; new formulation at lower price; appropriate evidence available.	Have CE mark (or expected within 1 year); New or innovative technology; Cost saving or cost neutral technology.	CE marking (before publication); Potential to improve health outcomes, but at an increased cost to the NHS.	Criteria same as those used by AGNSS; Process similar to TAP.	Priority topics and those where existing NICE guidance does not cover the whole topic.
Prioritisation criteria	Significant health benefit; Significant impact on NHS resources and other government policies; Inappropriate variation in the use across the country.	Provide most benefit to patients and the NHS; Scoring system.	Particular urgency to the NHS.	Not stated.	Discussion between NHS England, DH and Public Health England.

Source: NICE (2011a), NICE(2011b), NICE(2011c), NICE(2011d+), NICE(2011e+), NICE (2013a), NICE (2013b), NICE (2013c), NICE (2015a), NICE (2015b), NICE (2015c)

Similar to the German situation

- Do HTA agencies make their methods transparent and accessible?
 - Probably yes
 - No awareness of unpublished documents



Previous versions

www.iqwig.de ThemenCheck Medizin www.InformedHealth.org Home German

IQWiG Institute for Quality and Efficiency in Health Care

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Methods ▸ Methods Paper ▸ **General Methods: Previous versions**

Basic principles

Results

Quality assurance

Methods Paper

Previous versions of the General Methods (benefit assessment)

Here you will find the previous versions of [IQWiG's](#) methods on benefit assessment in chronological order.

General Methods 4.1

 General Methods 4.1
[PDF, 2 MB, not barrier-free]
completion 28.11.2013
published 28.11.2013

General Methods 4.0

 General Methods 4.0
[PDF, 2 MB, not barrier-free]
Published: 23.09.2011

General Methods 3.0

 General Methods 3.0
[PDF, 3 MB, not barrier-free]
Published: 27.05.2008

 Glossary on the General Methods 3.0
[PDF, 622 kB, not barrier-free]
Published: 27.05.2008

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Search

(i.e. Projects, D...)

Search



- Do HTA agencies make their methods transparent and accessible?
 - Probably yes
 - No awareness of unpublished documents
- Do HTA agencies adhere to their methods?
 - Not answered yet!
 - It takes time to include new methodological developments into guidance documents



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Methodological approaches in conducting overviews: current state

Results: In total, eight HTA agencies providing methodological support were found. Thirteen HTA agencies were found to have produced overviews since 2007

ology of overviews in international Health Technology Assessment (HTA) agencies.

Methods: We identified 127 HTA agencies and scanned their websites for methodological handbooks as well as published overviews as HTA reports. Additionally, we contacted HTA agencies by e-mail to retrieve possible unidentified handbooks or other related sources.

Same Observation for public health interventions

searches for primary studies published after the last review are often mentioned in order to update results.

Conclusions: Although the interest in overviews is rising, little methodological guidance for the conduct of overviews is provided by HTA agencies. Overviews are of special interest in the context of rapid assessments to support policy-making within a short time frame. Therefore, empirical work on overviews needs to be extended. National strategies and experience should be disclosed and discussed. Copyright © 2013 John Wiley & Sons, Ltd.



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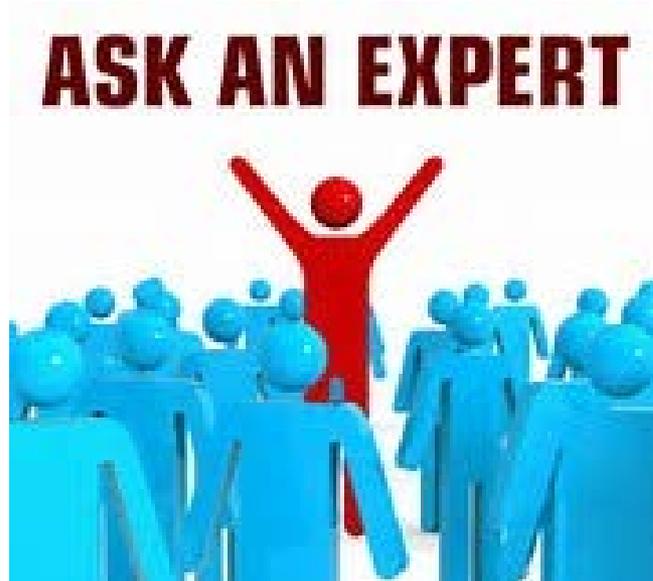
Guidance on...

- general HTA topics
 - prioritization
- other HTA domains
 - Health economic evaluations
 - Incorporating qualitative evidence
- by types of intervention
 - Public health interventions
 - Vaccination
- by types of product
 - Rapid reviews
 - modelling



Conclusion

- Dealing with HTA guidance documents is complex and time-consuming
- Limited to what is reported
 - Adherence to methods unknown
 - Rationale for methods unknown



Thank you for your attention!



dawid.pieper@uni-wh.de

