

Guideline development on healthcare related testing

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Impact

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The aim of this thesis is to facilitate and improve guideline development concerning healthcare related testing. To achieve this goal, the research findings presented in this thesis should be implemented in practice to have an impact on guideline development, and ultimately, on healthcare quality and people-important outcomes. This chapter discusses the valorisation potential of the research conducted in this thesis.

The thesis examines the challenges of developing guidelines for healthcare related testing and proposes solutions to overcome these challenges. Additionally, it defines the knowledge required for developing guideline recommendations on healthcare related testing and provides a tool to facilitate the specification of the test-management pathway to achieve impact on people-important outcomes. The results described in this thesis may be of relevance to various groups including 1) healthcare professionals and healthcare consumers, especially those participating in guideline panels, 2) guideline methodologists and chairs, and 3) guideline trainers.

Healthcare professionals and healthcare consumers

Healthcare professionals and consumers can benefit from the research conducted in this thesis, either directly through their participation in guideline panels, or indirectly in healthcare practice. The thesis focuses on guideline development, which occurs in guideline panels. Guideline panel members will be better able to fulfil their role if they are equipped with the necessary knowledge. For example, if guideline panel members are fully aware that the clinical effectiveness of testing is determined by evaluating the test-management pathway and that guideline panel members are able to interpret false positive and false negative test results in terms of people-important outcomes, they may be less likely to rely on test accuracy results solely. Additionally, the step-by-step guide for specifying the test-management pathway can assist guideline panel members in formulating focused questions about healthcare related testing. An online tool could further facilitate this process. The creation of such a tool is a priority in projects aimed at facilitating the implementation of methods. This tool could be integrated in software, such as the guideline development tool (GRADEpro by McMaster University and Evidence Prime).

In healthcare practice, healthcare professionals and consumers could also benefit from the knowledge generated in this thesis. If implemented properly, guidelines on healthcare related testing would be more transparent about the net benefits of testing, based on the evaluation of the evidence throughout the entire test-management pathway. This could result in more detailed guideline recommendations concerning testing, which may result in more awareness about the benefits and harms of testing



among healthcare professionals and consumers, the end-users of the guidelines. This in turn would have an impact on the quality of healthcare. For example through ultimately supporting informed and shared decision-making about testing in healthcare practice, and possibly reducing overdiagnosis and subsequent overtreatment.

Guideline methodologists and chairs

The results of this thesis could increase awareness among guideline methodologists and guideline panel chairs of the additional challenges involved in developing guidelines on healthcare-related testing beyond developing guidelines in general. Furthermore, it is important for them to recognise that guideline recommendations on healthcare related testing often fail to consider important factors necessary for adequate development, such as consequences of testing.

Methodologists and chairs could use the defined knowledge components in their instructions to guide panel members in developing proper guidelines on healthcare related testing. The examples provided in this thesis can facilitate the uptake of the test-management pathway concept in this educational process. Furthermore, guideline methodologists and guideline panel chairs can use the step-by-step guide for specifying a test-management pathway. This will help identifying focused questions about healthcare related testing, in collaboration with guideline panel members.

As previously mentioned, an online tool could aid in this process and could be integrated into guideline development software that is available on international level, such as the guideline development tool (GRADEpro). On a national level, initiatives are being taken to implement the required knowledge components for guideline panel members to adequately develop guideline recommendations about healthcare related testing and the step-by-step guide to specify the test-management pathway. Both topics are on the agenda for a Dutch Guideline Network thematic meeting (GENEVER). GENEVER is a networking community, within 'Richtlijnen Netwerk Nederland' (Dutch Guideline Network) that is easily accessible to professionals interested and/or experienced in guideline development and/or implementation. The bi-annual GENEVER meetings are well-attended by guideline methodologists and other professionals working in guideline development from various Dutch guideline organisations. Additionally, this thesis provides new knowledge that could be incorporated into the Dutch GRADE manuals and tools for developing guidelines on healthcare related testing [1, 2]. These reports have been developed by the Dutch GRADE Network, a formal entity of the international GRADE working group. Moreover, the new insights from this thesis could be embedded in the update of the 'AQUA-

Leidraad', the Dutch 'guideline for guidelines', which is regularly updated by Dutch guideline developers from multiple organisations, brought together in the 'Richtlijnen Netwerk Nederland' (Dutch Guideline Network) [3].

Guideline trainers

The research conducted in this thesis can be used by guideline trainers to educate and train guideline panel members, guideline methodologists, and guideline panel chairs. The defined knowledge components required to adequately develop guideline recommendations on healthcare related testing can serve as learning objectives in course and training material development. The examples presented in this thesis can aid in the adoption of the test-management pathway concept. The step-by-step guide for specifying a test-management pathway can be used to practice.

Initiatives that are being explored include incorporating the gained knowledge of this thesis project in the GRADE for Diagnosis course of the Dutch GRADE Network and developing add-on testing modules in the International Guideline Training and Certification Program INGUIDE. INGUIDE is a joint partnership of Guidelines International Network (GIN) and McMaster University's Department of Health Research Methods, Evidence, and Impact. Currently, add-on modules for certified guideline panel members, as well as for guideline methodologists, and eventually lead guideline developers and chairs, are being considered.

In addition, it is explored if the knowledge required for developing guideline recommendations on healthcare related testing, as well as the step-by-step guide to aid the specification of the test-management pathway and facilitate the formulation of focused questions, can be integrated in the ZonMw funded project 'Learning platform for guideline development: future-proof and sustainable'. This learning platform is a joint collaboration between the Care and Public Health Research Institute (CAPHRI) and the Maastricht School of Health Professions Education (SHE) at Maastricht University, the Academic Center of Epileptology Kempenhaeghe Maastricht UMC, and the Knowledge Institute of the Dutch Association of Medical Specialists.

Lastly, the results of this thesis will be incorporated into guideline training and coaching for various guideline developing organisations in the Netherlands.

The proposed initiatives are likely to succeed due to the networks and collaborations among all researchers involved in this thesis, both in the Netherlands and internationally.



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