Ludwig Boltzmann Institute
Health Technology Assessment

Analysing strategies for the identification of ineffectiveness in healthcare: the potential to prevent overdiagnosis

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⊗ Background and project aim

An unknown number of health technologies, including diagnostics, have never been assessed systematically, are being misused or overused and are therefore potentially ineffective. Ineffective usage of diagnostic procedures may lead to overdiagnosis resulting not only in wasteful resource allocation but also causing harm due to unneeded tests and treatments.

By actively assessing technologies throughout their entire life cycle, utilisation of ineffective interventions can be avoided, thereby increasing the quality of health care and ensuring the optimal use of resources.

The current project aims at analysing already implemented programmes for the identification of ineffective health technologies, concentrating on diagnostics, in order to elicit their potential to help preventing overdiagnosis.

⊗ Methods

Based on available review articles and reports, a hand search was conducted in relevant journals and HTA agency websites. Additionally, a literature review was performed in five databases (The Cochrane Library, CRD Database, EMBASE, Ovid MEDLINE and Web of Science) to complete the already identified literature. To gain further information on experiences regarding facilitators and barriers associated with the implementation of these programmes, international experts were consulted via e-mail and/or telephone interviews.

All programmes meeting the following criteria were included:

- ⊗ a detailed description of methods, criteria for identification and prioritisation and outputs,
- ⊗ focus on the identification of potentially ineffective health technologies currently in use,
- ⊗ implemented in practice. i.e. not in development phase,
- ⊗ designed as permanent programme.

⊗ Results

From seven programmes identified at national, regional and local levels, five also consider diagnostics:

- ⊗ GuNFT Guideline & PriTec-Tool (Spain)
- ⊗ Disinvestment at NICE: the "Do not do" database (Great Britain)
- ⊗ Framework for reviewing existing MBS items (Australia)
- ⊗ Choosing Wisely® Initiative (USA)
- ⊗ Program Budgeting and Marginal Analysis (international)

Two programmes that met the inclusion criteria do not assess diagnostics:

- ⊗ SBU "Uncertainties" and Disinvestment Project (Sweden)
- ⊗ PBAC: Disinvestment of pharmaceuticals and vaccines (Australia)

Table 1: Characteristics of programmes identifying ineffective diagnostics

	Methods	Output	Dissemination
GuNFT PriTec	Standardised; PriTec tool, HTA methods	Assessments	Not specified
NICE	Standardised; HTA methods, NICE guidance as a basis	Database Recommendation reminders	Published online
MBS	Standardised; environmental scanning, expert consensus	Assessments	Published online
CW USA	Not standardised; e.g., literature search, Delphi method, online survey	Top-5 lists Patient-friendly material	Published online, print media, face-to-face
PBMA	Standardised; e.g., literature search, expert consensus	Lists	Not publicly available

Abbreviations - GuNFT: Guideline for Not Funding existing health Technologies in health care systems, NICE: National Institute for Health and Care Excellence, SBU: Swedish Council on Technology Assessment in Healthcare, PBAC: Pharmaceutical Benefits Advisory Committee, MBS: Medical Benefits Schedule, CW: Choosing Wisely, PBMA: Program Budgeting and Marginal Analysis

Basic steps common to all programmes are identification, prioritisation (according to predefined criteria, overlapping in large parts for both steps), assessment of ineffective technologies and ultimately, the dissemination of recommendations. Ideally, evaluation of the impact of recommendations forms the last process step.

Even though government-initiated (top-down) programs can be distinguished from those developed by individual institutions/organizations (bottom-up), all have the primary aim of improving quality of care and patient safety. The majority also mention cost reductions and reallocation of resources as major goals. Physicians are regarded as key stakeholders for the successful implementation of recommendations. Further relevant target groups are clinical and political decision makers, other health professionals, patients and consumers.
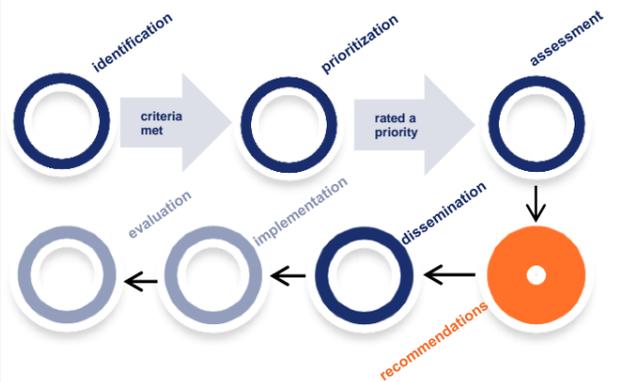

Figure1: Schematic overview of process steps

Thus far, recommendations formulated within the Choosing Wisely® initiative and the NICE disinvestment programme have been disseminated on a large scale. 41% of recommendations concern diagnostics in the Choosing Wisely® Top-5 lists, and 9% in the NICE database respectively. Currently, 6 MBS reviews (~20%) have assessed diagnostics or are in progress. The majority of diagnostic-related recommendations, mostly related to Internal medicine, Oncology, Gynaecology and Cardiology, concern either imaging technologies or screening: Of 122 identified diagnostic-related recommendations in Choosing Wisely®, 52% concern imaging and 20% screening. In the NICE database, 39% of recommendations advise against usage of specific imaging and 20% against screening technologies respectively.

⊗ Conclusion

Programmes for the identification of ineffective health technologies are also suitable for identifying ineffective diagnostics and may therefore help to prevent overdiagnosis. For the sustainable implementation of resulting recommendations, awareness for the need to combat ineffectiveness and increasing political support are crucial. More research on the actual impact of recommendations is needed.

⊗ Reference

Mayer J & Nachtnebel A (2013). Identifikation ineffektiver Interventionen und Technologien. Modelle und deren Umsetzung. HTA project report No.: 68; 2013, LBI-HTA, Vienna.

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