OP31 Assessment Of AI Supported Health Technologies - How To Move Forward?

Signe Daugbjerg (signeb.daugbjerg@unicatt.it), Rossella Di Bidino and Americo Cicchetti

Introduction. Artificial intelligence (AI)-supported technologies are rapidly developing and have the potential to improve healthcare quality at reduced cost. However, few examples exist of successfully deployed AI-technologies in a real-world context that have been adequately assessed. Therefore, the objective of this research is to: (i) identify existing health technology assessment (HTA) methods developed or adapted to assess AI-supported health technologies, (ii) identify new assessment topics or domains relevant for AI-technology uptake, and (iii) take the first step in developing a framework applicable for new challenges that emerge with the introduction of AI.
Methods. A systematic literature review of studies describing methods or frameworks to assess AI-supported health technologies was performed on PubMed from January 2010 until February 2021. Furthermore, a web page search of international HTA agencies and international organizations such as the World Health Organization, Organziation for Economic and Co-ordination and Development, and the European Commission was performed to identify important aspects to consider when implementing and assessing AI technologies.
Results. No assessment frameworks for AI technologies were identified from the systematic literature review or web page searches of international HTA agencies. Reports from international organizations highlight limitations or inability of most AI technologies to 'explain' their decision-making process (black box issue), leading to lack of trust in the technology that affects its adoption. It is recommended to put more emphasis on assessing transparency and 'explainability' of the AI solution as well as aspects of safety, ethical, legal, and social issues related to implementation and the development/training phase of the AI technology.
Conclusions. The results from this study uncover key gaps in frameworks posed for performing a systematic and holistic assessment of AI in a real-world context of health care. However, valuable information on relevant assessment aspects for AI-supported technologies have been identified.

The results will form the basis for the development of a framework to assist decision-makers in assessing AI-supported technologies in a holistic manner for a responsible deployment – the HTA AI Framework.

OP32 A Multistep Multistakeholder Priority Setting Exercise For Fecal Incontinence

Nicole O'connor (Nicole.oconnor@ncl.ac.uk), Katie Thomson, Kim Dangova, Sean Gill, Sheila Wallace, Sara Jackson and Fiona Pearson

Introduction. Fecal incontinence (FI) is the involuntary loss of feces and can affect up to 17 percent of community dwelling individuals, rising to 40 percent of older people in residential care homes. There is limited up-to-date evidence which formally set research priorities addressing FI. This project aimed to identify research topics of highest importance to key FI stakeholders.
Methods. An evidence gap map was produced incorporating three streams of evidence coded against predefined topic domains. The evidence streams included: emerging evidence identified through horizon scanning; existing evidence identified through systematic searches of bibliographic databases; and key FI stakeholder insights collected through an international survey. Findings were presented as a visual map to facilitate knowledge exchange during an online workshop with a purposeful sample of multidisciplinary stakeholders. The identified gaps in research were explored to see whether they were deemed representative of unmet needs, and as such, areas of priority to key FI stakeholders. Ideation techniques and group discussions were used to refine and rank priority areas.
Results. Overall, there was a mismatch between the existing and emerging evidence, and the priorities of key FI stakeholders. New pharmaceutical and medical technology innovations were limited. Eight percent of early-stage trials identified were concerned with the use of repurposed drugs. Within the existing evidence base, individual bowel management strategies and treatments were examined, however, key FI stakeholders desired interventions to improve patient education and the psychological aspects of living with FI. The five priority topics identified in order of importance are as follows: psychological support; lifestyle interventions; long-term effects; education; and constipation.
Conclusions. The robust methodology used to identify priority topics were successful in identifying broad and wide-ranging areas of importance to key stakeholders. The evidence gap map was a useful visual tool to facilitate knowledge exchange and highlight where research efforts have been focused historically, identifying a mismatch between the existing evidence base and what stakeholders consider important.

OP33 Expectations, Needs And Challenges Of Setting Up An International Collaboration On Horizon Scanning For Medical Devices

Renee Else Michels (michels@eshpm.eur.nl), Bert de Graaff, Payam Abrishami and Diana Maria Johanna Delnoij

Introduction. International collaboration on horizon scanning for medical devices is seen as desirable, because the development of medical devices is not limited to the national level, and horizon scanning for medical devices on a country-level can be challenging due to scarcity and diversity of information. The International Horizon Scanning Initiative Medical Devices Working Group (IHSI MDWG) was set up in June 2021. The objective of this study was

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to research the expectations and experiences of the participants of this initiative, in order to reflect on the possibilities and challenges of governing innovative medical technologies.
Methods. A questionnaire was sent out to 10 purposively selected representatives of the IHSI MDWG participating counties: Austria, Belgium, Canada, Denmark, Italy, Luxembourg, Netherlands, Norway, Portugal, and Sweden. The survey covered individual countries' respective purposes for an international horizon scanning system as well as questions related to the desired scope and perceived challenges of such a system. The questionnaire was supplemented with online, semi-structured, in-depth interviews with the same representatives from each participating country. These interviews provided for diving deeper into the survey topics as well as discussing the relation between horizon scanning and health technology assessment, the relation to other international horizon scanning collaborations, and the relation between an international versus a national horizon scanning system. In addition, participant observations were conducted at the Dutch National Health Care Institute and during IHSI MDWG working group meetings.
Results. Preliminary results are discussed first with participants after which we will draw our final conclusions and recommendations for practice. Our analysis focuses on exploring participants' expectations and experiences with international horizon scanning through triangulating the three sources of data in our analysis.
Conclusions. The study will report on the expectations, needs and challenges of setting up an international collaboration for horizon scanning of medical devices and reflect on the regulation and governance of innovative medical technologies across several countries in Europe and Canada.

OP34 Horizon Scanning A Matter Of Collaboration. A Description Of The Processes Of I-HTS Member Organizations

Iñaki Gutierrez-Ibarluzea (igutierrezibarluzea@bioef.eus), Maximiliam Otte, Hans-Peter Dauben, Juan Antonio Blasco-Amaro, Izzuna-Mudla Mohamed Ghazali, Syaqirah Bt Akmal, Pollyanna Gomes, Grace Huang and Brendon Kearney

Introduction. Horizon Scanning (HS) has been part of the health technology assessment (HTA) world since the end of 20th century. In accordance with the life cycle concept of heath technologies, there have been different organizations that have devoted part of their portfolio to HS's so called Early Awareness and Alert Systems. In 2017, a legal entity international Health Tech Scan (iHTS) was created on the basis of the previous existing network EuroScan. Our aim is to describe the current achievements of the network, the methods used by its members, and their achievements.
Methods. In 2010, EuroScan decided to analyze its members' methods and processes to perform HS. We used a previously defined questionnaire to revisit the analysis of methods, processes, and impact of the founded legal entity i-HTS. We analyzed the clients, stakeholders involved, impact on health systems and alliances, as well as the current achievements as a group.
Results. i-HTS is currently rooted mainly in Europe and Asia-Pacific with members in the Americas and with ambassador programmes in Africa. The individual members have continued their achievements with special focus on three main aspects: proactive approach to innovators, stakeholder involvement, and client orientation. In most cases, the members of i-HTS produce information that is used for decision-making purposes, some of which influences the national or regional benefit package. Methods did not differ but the level of involvement of stakeholders in the different phases of the process. Some members also include in their portfolio early advice to innovators.
Conclusions. Early Awareness and Alert Systems are key to inform health care systems around technologies that could impact the management of patients in different contexts. There is a need to better understand the needs of the clients and the importance of HS in order to improve their efficiency. iHTS is in the process of redesigning its methods toolkit with the participation of all its members.

OP35 Suitability Of Preference Methods Across The Medical Product Lifecycle: A Multicriteria Decision Analysis

Jorien Veldwijk (veldwijk@eshpm.eur.nl), Esther de Bekker-Grob, , Eline van Overbeeke, Stephanie Tcherny-Lessenot, Cathy Anne Pinto, Rachael L. DiSantostefano and Catharina G.M. Groothuis-Oudshoorn

Introduction. To understand the importance of the preference methods criteria to stakeholders at each decision point in the Medical Product Lifecycle (MPLC) and to determine the suitability of commonly applied preference methods (Discrete Choice Experiment [DCE], swing weighting [SW], probabilistic threshold technique [PTT], Best-Worst Scaling case 1 [BWS1], Best-Worst Scaling case 2 [BWS2]) for a given decision-point.
Methods. Nineteen preference methods criteria of an existing performance matrix were incorporated in an online survey of industry, regulatory, and health technology assessment (HTA) stakeholders. All methods criteria were given a relative weight based on the SW ranking and point allocation task in the survey. Based on this relative weight and the performance matrix values, an overall suitability score was calculated for each method per critical decision point along the MPLC. Several sensitivity analyses were conducted for which the performance matrix was adapted.
Results. In total 59 industry, 29 regulatory, and 5 HTA representatives completed the survey. In general, 'estimating trade-offs between characteristics', and 'estimating weights for treatment characteristics' were important preference method criteria throughout all MPLC decision points, while other preference method criteria were most

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