evaluate the strengths/weaknesses of the new technology, potential population and role in the pathway, and barriers/facilitators to adoption. The CPA forms the basis of economic modeling that helps assess the monetary value of the new technology.
Results: The application of CPA from two recent projects will be presented: an innovative diagnostic test for respiratory tract infections and a medical device for treating cataracts. Additionally, the value of CPA in eHTA will be described from the technology developers' perspective. In both projects, CPA was used to inform the potential value propositions of the new technology and its positioning in the care pathway. It also helped to optimize the structure of the early economic model and to identify evidence generation needs. The early model identified the pathway that was more likely to be cost effective in the future.
Conclusions: CPA is a valuable method within the context of eHTA. Alongside identifying the potential role and positioning of the new technology, test developers found the assessment useful for informing internal strategy decisions and discussions with potential external investors. The developers were able to demonstrate the clinical perspective around the value of the test, elicited through an independent and rigorous methodology.

PP03 Investigating Technological Strategies In The Hospital Setting: Insights From The Dutch Context

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Introduction: Rapid advancements in technology are significantly impacting the healthcare system, and decision-making regarding technology adoption occurs at multiple decentralized levels within hospitals. National bodies seek to standardize this process, yet differing visions and strategies hinder centralization. This study explores the relationship between technological innovation and hospital strategies, focusing on scanning and assessment, aiming to assess the feasibility of centralized decision-making.
Methods: To do this, we performed a qualitative analysis through 23 semistructured interviews in seven hospitals in the Netherlands, a country characterized by strong healthcare innovation and decentralization. We interviewed different actors involved in technological innovation, on different levels in the organization: CEOs, medical doctors, medical physicists or similar roles, and innovation managers. Ethics approval was obtained, and interviews were conducted, recorded, transcribed, and shared with participants for accuracy confirmation. Thematic analysis via grounded theory methodology and ATLAS.ti software generated insights on technological innovation's relationship to hospitals' strategies. Initial codes were refined into themes relevant to the research question.
Results: Hospitals primarily aim to provide optimal patient care, with academic hospitals emphasizing research and education. Some hospitals aspire to be pioneers in adopting new technologies, while patient-centric healthcare is a shared goal. Technological strategies are not precisely designed in hospitals, being shaped by factors like people, financial constraints, or external environments. Hospitals' scanning of technologies lacks systematization, and evaluations before and after technology adoption are not univocally performed. The need for systematic scanning and assessment practices is recognized by some interviewees, while others emphasize the importance of experimenting without the constraint of evaluation, perceiving it as a hurdle delaying innovation.
Conclusions: Centralization could represent a benefit for hospitals, allowing them more streamlined decision-making, but it could also be perceived as a barrier. Involving hospitals' stakeholders in centralization would be crucial to achieve it through a joint effort. Suggestions for future research could include focusing on a specific hospital, involving more stakeholders, and exploring other decentralized healthcare systems.

PP04 Assessing The Utility Of Natural Language Processing In Generating A Granular Estimated Indication For A Horizon Scanning Database

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Introduction: Detailed, precise information on a pharmaceutical's projected therapeutic use is required for horizon scanning. Inferring an estimated indication from trial protocols is a key skill of horizon scanners. The International Horizon Scanning Initiative (IHSI) database utilizes semi-automated data collection. This pilot aimed to verify that the extraction of relevant word sets to generate an estimated indication could be semi-automated.
Methods: Ten drugs approved in Europe in 2021 were selected as the pilot test set. The test set included drugs approved for the treatment of rare diseases (n=4), haemato-oncology (n=3), and non-oncology conditions (n=3). Eight of the drugs were approved based on phase III trials. The assessment comprised a review of the pivotal trial that supported product registration for these drugs. We undertook a comparison between a human curator and a natural language processing (NLP) algorithm in generating granular tags relating to key aspects of the drugs' estimated indication (stage of disease, patient-specific subgroup, and place in treatment).
Results: In 50 percent of cases, the NLP accurately tagged a word or word set related to stage of disease, patient-specific subgroup, or place in treatment, which was also tagged by human curators. In 50 percent of cases, the NLP did not identify words or word sets tagged by human curators. Where relevant, the NLP successfully tagged the same word sets relating to stage of disease for all drugs in the test set. The same word sets relating to patient-specific subgroup were

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successfully tagged for three drugs in the set. NLP successfully tagged word sets relating to place in treatment for two drugs.
Conclusions: The NLP algorithm is successful in extracting relevant word sets, which can be used to generate an estimated indication in an automated or semi-automated process. The pilot highlighted that further testing is required to advance the sensitivity of the algorithm. Further piloting exploring both unsupervised and supervised modeling approaches (named entity recognition and deep neural networks, respectively) is planned.

PP06 Incentives To Incorporate Innovation Into Care Delivery Processes: A Scoping Review And SWOT Analysis

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Introduction: This study investigated the various incentives employed in Organisation for Economic Co-operation and Development (OECD) and European Economic Area (EEA) countries to enhance access to innovative medical technologies. The literature review encompasses real and theoretical models, offering an overview of strategies to bridge the gap between innovation and access. A strengths, weaknesses, opportunities, and threats (SWOT) analysis was conducted to analyze incentives in health system and therapeutic area context.
Methods: The review methodically examined peer-reviewed articles, reports, and policy documents published between 2000 and 2023. Databases searched include PubMed, Scopus, Web of Science, and EconLit. Grey literature was searched from international organizations' websites, including the World Bank, World Health Organization (WHO), OECD, Pan American Health Organization (PAHO), and European Commission. Inclusion criteria focused on relevance of financial and non-financial mechanisms to effective implementation of innovative medical technologies, and their application within OECD and EEA countries. COVID-19 research, vaccines, cost-effectiveness studies, and studies that did not discuss implementation were excluded. A SWOT analysis was utilized to categorize the mechanisms by therapeutic area and health system design.
Results: The review identified diverse mechanisms, including reinsurance, impact bonds, outcomes-based agreements, annuity payments, and risk-sharing agreements. Financial mechanisms, such as outcomes-based agreements, were prominent but highlighted implementation obstacles, including a lack of data infrastructure capable of linking outcomes to payments, which ultimately undermines the effectiveness of these strategies. Non-financial mechanisms, such as population health management, were also identified. The effectiveness varied, with some models showing significant improvement in technology accessibility, while others faced implementation and affordability challenges. Comparative analysis highlighted differences in efficacy dependent on the therapeutic area and type of health system in which the incentive is applied.
Conclusions: The review underscores multifaceted approaches to improve access to innovative medical technologies. While financial incentives play a crucial role, non-financial strategies are also vital. This study provides insights into which incentives are most effective in certain health systems and therapeutic areas. Policymakers can benefit from these insights, leveraging successful models and addressing challenges to ensure equitable access to medical innovations.

PP07 One Bad Apple Can Spoil The Barrel: Are We Effectively Evaluating Software As A Medical Device?

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Introduction: There are many differences between medical devices, pharmaceuticals, and Software as a Medical Device (SaMD). This should impact the way SaMDs are evaluated in health technology assessment (HTA). SaMD technologies often target multiple indications, are regularly updated, and often result in non-quantifiable benefits. The objective of this research was to identify problems and potential solutions when evaluating SaMDs in England.
Methods: This research took the perspective of the HTA process in England. We conducted a pragmatic review of publicly available grey literature, such as National Institute for Health and Care Excellence (NICE) guidelines and processes, government schemes, funding mechanisms, and other published reports and opinion pieces, to summarize how SaMDs are currently being evaluated. This included an overview of the current systems and funding structures (inclusive of recent developments), where potential issues may lie, and what is currently being done to address these issues. We concluded by making recommendations to improve the evaluation of these technologies.
Results: Difficulty quantifying outcomes of SaMD technologies, alongside the preference of decision-makers to evaluate technologies for single indications, causes a bottleneck of unevaluated technologies to build. HTA bodies then group many non-identical technologies into single appraisals, resulting in a range of SaMD technologies with varying quality being implemented through managed access agreements. Some schemes and funding mechanisms led by public bodies in England aim to improve efficiency and encourage technological development. However, the HTA process in England remains characterized by long evaluation processes and high clinical evidence requirements, which many SaMD providers find difficult to navigate.
Conclusions: Although progress has been made, there is clear incentive to improve the way in which SaMD technologies are assessed in HTA. We recommend that a more rapid mixed-method approach be implemented. This should draw on quantitative economic analysis supplemented with qualitative clinical, patient, and expert opinion. SaMDs should be evaluated either individually or within smaller groups than current evaluation systems.

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