

VP30 The Use Of Artificial Intelligence In Health Technology Assessment

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INTRODUCTION:

To make itself more relevant in a longer perspective health technology assessment (HTA) will have to make use of novel ways to improve its services; in particular in terms of rapid response, cost savings and reduction of risk of bias. The use of artificial intelligence (AI) offers significant assistance at essentially all stages of any HTA. It can search, retrieve, read and organize relevant literature, not only from traditional databases but from numerous data sources related to specific issues (e.g. clinical trials, health outcomes, payment of services), and from databases in other areas such as in social, justice, and educational services, and public health.

METHODS:

This presentation will explain the use and feasibility of AI in HTAs based on the findings from a currently ongoing project in the province of Alberta Canada. It will (i) provide an overview of AI in healthcare, (ii) outline selected international efforts of using AI in systematic reviews, such as the Robotreviewer, (iii) describe the information needed, and the development of the algorithms for using AI in HTAs, and (iv) report on the findings from a comparative study of human versus AI resources in performing an HTA.

RESULTS:

This project has just started, however preliminary findings from the comparative analysis of AI versus human performance on a specific topic for HTA will be presented.

CONCLUSIONS:

It is expected that the comparative study will demonstrate that artificial intelligence will become a useful tool in HTA in that it will significantly speed up systematic reviews, and decrease the risk of bias in syntheses of findings from research.

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VP33 Peroral Endoscopic Myotomy For Treating Achalasia: A Rapid Review

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INTRODUCTION:

The best available research and funding policy evidence regarding the regulatory status, patient selection criteria, safety, clinical effectiveness, and financial impact of peroral endoscopic myotomy (POEM) for the treatment of achalasia was synthesized for statewide decision making for a South Australian local health network.

METHODS:

A comprehensive systematic search of twenty-three gray literature sources and three published literature databases for international evidence was conducted, based on a priori inclusion criteria. The methodological quality of the included studies was critically appraised. Data extraction and synthesis were conducted in narrative form.

RESULTS:

Short-term safety and clinical data from very low-level studies showed that POEM appears to be a relatively safe and clinically effective endoscopic treatment for esophageal achalasia, compared with laparoscopic Heller myotomy (LHM). One primary safety concern consistently highlighted by the literature was gastroesophageal reflux (GER) after POEM, since no anti-reflux procedure is involved. Operative time and length of hospital stay for POEM were comparable with LHM and potentially favor POEM. The comparative long-term outcomes for the POEM procedure are not known. No studies have investigated the cost-effectiveness of POEM. Conflicting findings were reported on whether POEM is cheaper or more expensive than LHM. POEM is a technically challenging procedure with a substantial learning curve. Patients who undergo POEM may require postoperative surveillance and testing to evaluate procedural success and to identify potential complications. Current literature showed limited analysis and systematic elucidation of an optimal patient group that may best benefit from POEM.