

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.

CONCLUSIONS:

The POEM procedure should be carried out at an experimental or trial level only, with strict auditing of results. POEM procedures should ideally be performed at institutions where an adequate level of surgical and critical care backup is available to provide expert care should complications arise. Monitoring of patient outcomes, including symptom improvement, is recommended for clinical assessment and reporting to determine future adoption in the South Australian public health sector.

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VP34 Incorporation Of Medical Equipment In Northeastern Brazil

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INTRODUCTION:

Improving universal health coverage is a big challenge in many nations. Nevertheless, in countries like Brazil, the Constitution provides for universal access to meet population needs. Medical equipment is indispensable for the diagnosis and treatment of diseases in public and private health services. This study aims to analyze medical diagnostic equipment incorporation in a Brazilian state.

METHODS:

This evaluative research was carried out using data from Brazil’s Unified Health System (SUS) and Private Health Services. The research took place in Ceará, Northeastern Brazil. It is the eighth most populous Brazilian state, with 8.8 million inhabitants. Data on the types and quantity of medical devices in the public and private services were collected from August 2005 to August 2017. The results were analyzed by comparing population and normative parameters with technology incorporation in Brazil.

RESULTS:

A mean of 17.6 +/- 10.6 (SD) devices were incorporated each year in SUS versus 31.7 +/- 15.7 (SD) in the private services. Over a twelve year period, the

incorporation of equipment increased 59.7 percent in the public system and 152.6 percent in the private services. The production from these technologies increased to 18.1 percent. Considering both public and private services, tomography equipment coverage exceeds (147.4 percent) the parameter established by the Ministry of Health while magnetic resonance imaging equipment coverage is 90.5 percent.

CONCLUSIONS:

An expressive number of medical devices were incorporated in public and private health services, with higher rates in the latter. Both services presented a downward trend, suggesting that the incorporation of equipment is no longer needed. Such an extra coverage reveals an uncritical incorporation of these devices, that was not based on real needs; therefore, it is necessary to develop an action plan aimed at a better distribution of these devices to allow effective universal coverage.

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VP36 Benefit Cost Analysis Of Electronic Claims Processing System In Ghana

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INTRODUCTION:

Since the inception of the Ghana National Health Insurance Scheme (NHIS), it has been pursuing a number of provider payment mechanisms that could not only control the continuous escalating costs of claims payout, but also facilitate the claims processing time. In lieu of this, electronic processing of claims (E-claims) was introduced in 2013 as part of the World Bank supported Health Insurance project that sought to facilitate the financial and operational management of the NHIS. It was piloted in 29 health facilities up to March 2014. They reported cost savings made by the NHIS using E-claims, creating interest in scaling it up. However, the comparative effectiveness and cost effectiveness of E-claims to the health system compared to manual claims processing is unknown. Therefore, to provide decision makers with the appropriate information to choose between manual and E-claims processing, this study sought to evaluate the cost-benefit of E-claims.