

pandemic. The challenge for clinical and biomedical engineers is to develop a bridging system to maintain the basic health services for chronic pathologies. Populations living in low-income countries did not have access to basic health services during the pandemic and depended on the scarce resources of their emergency health system. There were also equity issues between urban and rural populations. In this context, telemedicine tools should be directed toward maintaining the basic health services for patients with chronic pathologies. This study evaluated the results of a telemedicine system in remote public hospitals in Paraguay to show how health care for patients with chronic pathologies has been maintained by providing access to tertiary level diagnostic services by specialists.

Methods. This descriptive study evaluated the results of using telemedicine between 2014 and 2020 for diagnosis in remote public hospitals to bridge the gap in providing basic health services for patients with chronic pathologies during the COVID-19 pandemic.

Results. A total of 620,289 telediagnoses were performed in 67 hospitals. The 399,806 electrocardiogram diagnoses performed in 61 hospitals were normal (62%) or showed unspecified arrhythmias (13%) and sinus bradycardia (10%). The 207,597 telotomography tests performed in 12 hospitals were performed on the head because of motorcycle accidents and cerebrovascular diseases (54%), on the chest (14%), and other anatomical regions. The 12,867 electroencephalograms performed in 19 hospitals were for the antecedents of seizure (54%), evolutionary controls (14%), and headache (12%). The 19 ultrasound studies corresponded to prenatal controls.

Conclusions. Although the telemedicine tool implemented in public health to bridge the gap in basic health services for patients with chronic pathologies during the COVID-19 pandemic offered better equity in the provision of services in remote locations, a widespread use assessment should be undertaken before this tool is adopted.

PP167 Cost Effectiveness Of Universal Childhood Vaccination Against Hepatitis A

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Introduction. Hepatitis A (HA) is a liver disease with a low mortality rate, but it can cause debilitating symptoms and fulminant hepatitis in some cases. Its incidence is greater in geographical areas with poor sanitation and hygiene. Spain is considered a low-endemicity country, so universal childhood immunization against HA is currently not financed by the National Health System. The aim of this study was to synthesize the scientific evidence on the cost effectiveness of universal childhood vaccination against HA.

Methods. Full economic evaluations, published in the English or Spanish languages, were included if they reported outcome measures related to the prevention of HA, adverse effects,

or incremental cost-effectiveness ratios (ICERs). The Medline, Embase and Cochrane Library databases were searched for articles published from the beginning of the databases to April 2018.

Results. A total of 23 economic evaluations were included: one in a country of high endemicity, nine in countries of intermediate endemicity, and 13 in countries with low endemicity. Only one Spanish study, published in 1997, was found. Studies conducted in high- and intermediate- endemicity countries concluded that a universal childhood vaccination program against HA was a cost-effective option. However, in the case of countries with low endemicity the results were heterogeneous, although most agreed that a systematic vaccination strategy would not be a cost-effective option and that the adoption of such a strategy would not be justified given the limited benefits it would offer. The results of the economic evaluations depended on parameters such as the price and duration of the vaccine effect and the program coverage.

Conclusions. In countries with low endemicity the results were heterogeneous, although most studies concluded that the implementation of a universal vaccination strategy is not justified from the point of view of cost effectiveness.

PP168 Quality-Of-Life Study For Caregivers Of People With Drug-Resistant Focal Onset Seizures

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Introduction. The quality of life (QoL) of caregivers who look after individuals with drug-resistant focal-onset seizures (FOS) can be significantly affected by their caregiving responsibilities. This is widely recognized by various health technology assessment bodies, including the National Institute for Health and Care Excellence. The aim of this study was to assess the QoL and to generate health-related utility data for individuals caring for adults with drug-resistant FOS. This project will provide critical information on an often neglected and undervalued aspect of epilepsy.

Methods. An online survey including questions on sociodemographic characteristics, caregiver burden and productivity, the EQ-5D-5L, and the Care Related Quality of Life (CarerQoL-7D) was administered to caregivers of individuals with drug-resistant FOS in the United Kingdom.

Results. The analysis included 86 caregivers. The majority were men aged between 25 and 34 years whose caring responsibilities ranged from 25 to 34 hours per week. In the previous 28 days, most individuals they cared for experienced four FOS, with the longest seizure-free period ranging from 6 to 15 days. The patients had previously been prescribed at least four anti-seizure medications.

The caregivers' mean EQ-5D-5L score was 0.66 (range -0.19 to 1), whilst the mean CarerQoL-7D score was 71 (range 21 to 100). The most affected dimension of the EQ-5D-5L was self-care, while

the most affected dimension of the CarerQoL-7D was physical functioning.

Conclusions. Caring for people with drug-resistant FOS has a negative impact on the QoL of caregivers, particularly in the domains of self-care and physical functioning.

PP180 Optimal Treatment Sequence For Targeted Immune Modulators For The Treatment Of Moderate To Severe Ulcerative Colitis

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Introduction. Several targeted immune modulators (TIMs) have demonstrated effectiveness in moderate-to-severe ulcerative colitis, including adalimumab, golimumab, infliximab, infliximab biosimilars, tofacitinib, ustekinumab, and vedolizumab. In addition to assessing individual TIMs, evaluating TIM sequences can inform clinical care as well as coverage and reimbursement policies. Our objective was to identify optimal treatment sequences based on maximum net health benefit (NHB), lowest total cost (cost minimizing), quality-adjusted life-year (QALY) maximization, or convenience (avoidance of intravenous treatments), and to evaluate their cost effectiveness compared with conventional treatment from the health sector perspective.

Methods. We developed a Markov model with eight-week cycles and a lifetime time horizon. The health states were active, clinical response without remission, remission, and death. TIM efficacy was informed by a network meta-analysis conducted by the Institute for Clinical and Economic Review. Sequences were generated by ranking TIMs and then conventional treatment according to NHB, cost minimization, QALY maximization, or convenience and combining top ranked TIMs in the biologic naïve and biologic experienced populations. NHB was calculated at USD 150,000 per QALY. Probabilistic sensitivity analysis (PSA) was undertaken to estimate the probability of each sequence having the highest NHB rank, QALY maximizing rank, and cost-minimizing rank.

Results. Twenty-one sequences were evaluated. The sequence with the highest NHB was infliximab followed by tofacitinib (-0.12 QALYs), which also had the lowest incremental costs (USD37,266). For orally and subcutaneously administered TIMs, the sequence of golimumab-tofacitinib had the highest NHB (-0.34 QALYs). Ustekinumab-vedolizumab was not only the top ranked sequence as measured by QALY maximization (0.172 incremental QALYs), but it also had the highest total incremental cost (USD166,094). Results of the PSA were consistent with deterministic rankings for the top-ranking sequences and showed that the top two or three regimens were close in magnitude.

Conclusions. The optimal sequence with regard to NHB and cost minimization was infliximab or biosimilars, followed by tofacitinib, adalimumab, or vedolizumab. Sequences that generated the most QALYs began with ustekinumab, followed by vedolizumab, tofacitinib, and adalimumab.

PP184 Twenty Years of Health Technology Assessments on Robotic Assisted Surgery: A Summary

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Introduction. Da Vinci robotic-assisted surgery (RAS) has been evaluated by health technology assessment (HTA) organizations across the world. This study aimed to analyze the existing HTA reports over years, countries, and procedures.

Methods. Publicly available health technology appraisal reports on RAS published from January 2000 to November 2020 were identified via a targeted literature search. The literature search was conducted in PubMed, the Centre for Reviews and Dissemination database, the International Network of Agencies for Health Technology Assessment database, and Google scholar. Reports related to the da Vinci RAS were included. Full texts of reports were used for the analysis.

For the HTAs that recommended RAS, the directional conclusion was considered as positive. For HTA reports that discouraged the use of RAS, the directional conclusion was considered as negative. The rest were considered as neutral. The reports were analyzed by year, country, and procedure.

Results. We identified 65 HTA reports comprising 128 procedure-level assessments of RAS by 42 HTA organizations in 21 countries over 20 years. The annual number of assessments increased over time. The countries that completed the most assessments were Sweden (14 reports, including 15 procedure-level assessments: 13% positive and 80% neutral) and Canada (11 reports, including 20 procedure-level assessments: 65% positive).

The topics of the assessments covered 27 surgical indications in urology, gynecology, thoracic, general, and ear, nose, and throat. The conclusions of the HTAs varied by surgical indication. Prostatectomy (33 reports: 85% neutral or positive) was the most widely assessed surgical indication, followed by hysterectomy (16 reports: 81% neutral or positive), nephrectomy (15 reports: 73% neutral or positive), and rectal resection (10 reports: 100% neutral or positive).

Conclusions. The number and breadth of HTAs on RAS have grown at an increasing rate over the last 20 years. The directional conclusion of assessments varied by procedure and country. Further analysis is warranted to understand the factors contributing to HTA conclusions on RAS.

PP195 Cost Utility Of Transcatheter Aortic Valve Implantation For Patients With Inoperable Severe Aortic Stenosis In Brazil

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Introduction. Transcatheter aortic valve implantation (TAVI) represents a new treatment option for aortic stenosis. This study