

Oral Presentations

OP139 Attaining Universal Electrocardiographic Diagnosis Coverage Through Telemedicine

Pedro Galvan (ibiomedica@iics.una.py), José Ortellado, Ronald Rivas, Juan Portillo, Julio Mazzoleni and Enrique Hilario

Introduction. Innovative health technologies, like telemedicine, offer advantageous telediagnostic apps that can improve the health care of populations in remote regions. However, evidence on how these developments can enhance universal coverage for electrocardiographic (ECG) diagnosis to support a cardiovascular disease prevention program is limited. The utility of telemedicine for attaining universal coverage for ECG diagnosis according to the national cardiovascular disease prevention program in Paraguay was investigated.

Methods. This cross-sectional survey included adults (aged 19 to 80 years) and children (aged 1 to 18 years) with a medical prescription. The study was carried out by the Telemedicine Unit to evaluate the utility of a telemedicine net for a countrywide detection and prevention program for cardiovascular disease. The results obtained by the tele-ECG net, which was implemented in sixty public hospitals countrywide, were analyzed and used to verify adherence to the cardiovascular prevention program.

Results. Between 2014 and 2019, 331,418 remote ECG diagnoses were performed. Of these, eighty-two percent ($n = 270,539$) were in adults and eighteen percent ($n = 60,879$) were in children. Among the adult diagnoses, the majority (52%) were pathological and included sinus bradycardia (13%), right bundle branch block (6%), left ventricular hypertrophy (5%), and ventricle repolarization disorder (5%). Among the children, only twenty percent of diagnoses were pathological and included sinus bradycardia (11%) and sinus tachycardia (4%). The mean rate of adherence to the prevention program was 38.2 per 1,000 diagnoses performed.

Conclusions. The results showed that telemedicine can significantly enhance coverage for universal ECG diagnosis to support cardiovascular disease prevention and health programs. However, before carrying out the systematic implementation of such a program contextualization using the regional epidemiological profile must be performed.

OP141 Health Technology Assessment In India: Current Scenario And Way Forward

Komal Shah (drkomalhshah@gmail.com), Somen Saha, Priya Kotwani, Malkeet Singh and Kirti Tyagi

Introduction. India has introduced health technology assessment (HTA) as a tool for improving the allocation of health resources. The core mandate of HTA in India (HTAIn) is to undertake critical appraisal of available technologies, identify cost-effective interventions, and help the government pursue evidence-informed decisions regarding public health expenditures. We conducted a systematic review to assess economic evaluation studies published in the last four years from India.

Methods. Economic evaluations published from September 2015 to September 2019 were identified by searching various databases, including PubMed, Scopus, Embase, The Cochrane Library, and CINAHL according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guideline. Cost-effectiveness studies and HTAs reported or conducted in India were included. Two independent reviewers performed the final selection of studies by assessing the full-text articles and conducted the data extraction. Differences of opinions were resolved through discussion and mutual consensus.

Results. After screening 2,837 articles, seventy met the inclusion criteria and were selected. The articles predominantly used secondary data (70%) to evaluate the cost effectiveness of an innovation. Among the technologies assessed, fifty-seven percent were curative in nature and most commonly addressed infectious diseases (27%), closely followed by non-communicable diseases, and maternal and child health. Principally, the cost effectiveness of a technology was expressed in terms of disability-adjusted or quality-adjusted life-years. Only two studies reported negative findings.

Conclusions. HTA can play a pivotal role in equipping policy makers and public health payers to make appropriate decisions for healthcare budget allocations when mapped with the true disease burden of the population. It is important to highlight negative results and to create a national repository of HTA studies to facilitate faster adoption of best practices in India.

OP145 Review Of eHealth Interventions For Improving Primary Healthcare In Low-Middle Income Countries

Apurvakumar Pandya, Devang Raval, Priya Kotwani (priya.kotwani@gmail.com) and Somen Saha

Introduction. Web-based and mobile health interventions, also called eHealth, have significant potential to deliver cost effective, quality health care. The present review maps common eHealth technology solutions for primary healthcare by evaluating their safety, efficacy, and effectiveness, and the challenges associated with their implementation in low-middle income countries (LMIC) in the last ten years.

Methods. A search of various electronic database was conducted, including PubMed, Scopus, and PsycINFO, to identify articles published between 2009 and 2019 that focused on the implementation of eHealth in the primary healthcare setting across LMICs. A total of 450 articles were screened and thirty-nine relevant articles were selected for review.

Results. The thirty-nine included studies were classified into the following four categories: (i) assessment of intervention effects (n = 26); (ii) cost-benefit analysis (n = 4); (iii) systematic review (n = 5); and (iv) conceptual exploration of eHealth interventions (n = 4). The eHealth studies covered three domains: (i) non-communicable diseases; (ii) reproductive, maternal, newborn, and child health; and (iii) other health issues. The included eHealth technologies comprised mobile health (n = 27), telemedicine (n = 10), and information and communication technology (n = 2).

Conclusions. The majority of studies assessed eHealth technologies based on the following eight dimensions: safety, clinical effectiveness, technical aspects, acceptability, cost, ethical aspects, adaptability to local needs, and scalability. However, evidence on safety, cost effectiveness, and scalability were limited. The main implementation challenges identified were technology development and maintenance costs, the need for trained human resources, and acceptability among users. The methodologies and assessment frameworks of the studies were heterogeneous in nature, highlighting the need for a robust, standardized, and comprehensive framework for assessing eHealth technologies.

OP178 Assessing Digitally Enabled Therapies: Challenges And Opportunities

Shaun Rowark (shaun.rowark@nice.org.uk) and Heather Stephens

Introduction. In 2017, the National Institute for Health and Care Excellence (NICE) and the National Health Service England

established a program to identify Digitally Enabled Therapies (DET) that increase access to Improving Access to Psychological Therapies (IAPT) services. The aim was to determine whether DETs could improve service efficiency, and whether outcomes are at least as good as those achieved by NICE-recommended non-digital therapies.

Methods. An IAPT assessment briefing (IAB) was developed for each eligible DET. IABs included an assessment of content, technical standards, clinical effectiveness, and cost and resource impact. IABs were reviewed by the NICE IAPT expert panel to decide whether a DET is suitable for evaluation in IAPT services, needs further development, or is not suitable. Suitable DETs were evaluated for up to two years.

Results. Of 154 DETs reviewed by the program, fourteen had IAB assessments. The high dropout rate was due to ineligible products or developer withdrawal. Of the fourteen IABs, five were recommended for evaluation, one was recommended for development, and eight were not recommended.

Conclusions. DETs can provide an alternative for patients who may not be able to access treatment. When establishing programs to review DETs, centers must consider the quality of the products submitted and, where necessary, make pragmatic decisions about assessment criteria.

OP179 Nationwide Electroencephalographic Screening Using Telemedicine Apps

Pedro Galvan (ibiomedica@iics.una.py), Ronald Rivas, Carlos Arbo, Marta Cabrera, Silvia Abente, Juan Portillo, Julio Mazzoleni and Enrique Hilario

Introduction. Disruptive telemedicine tools can help overcome the lack of specialized care and electroencephalographic (EEG) support for diagnosing and treating nervous system disorders such as epilepsy in remote communities. However, evidence on how such cloud-based platforms could enhance data-driven health care is limited. The utility of telemedicine-based apps to achieve EEG screening of communities in rural areas of Paraguay was investigated.

Methods. This descriptive study was carried out by the Telemedicine Unit of the Ministry of Public Health in collaboration with the Department of Biomedical Engineering and Imaging of the Health Science Research Institute in Paraguay and the Basque Country University in Spain to evaluate the utility of telediagnostic apps for EEG screening. For this purpose, the results obtained by tele-EEG apps implemented in nineteen public community hospitals were analyzed to determine the utility of the apps as epidemiological surveillance tools.

Results. Among the 10,791 remote EEG studies performed, the most common reasons for the test included epileptic seizure (44%), headache (22%), seizure disorder (8%), follow up (6%), attention deficits in children (5%), cognitive impairment (4%), cranioencephalic trauma (3%), brain death (1%), history of seizure (0.9%), abnormal movements (0.7%), and behavioral disorders (0.5%).

Conclusions. The results showed that telemedicine apps can significantly enhance nationwide EEG screening by freeing up