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POSC44 Extra Regional COVID-19 Patients Transfers: A Retrospective Analysis of Distance, Time and Cost for Train, Helicopter and Fixed-Wing Ambulances

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Objectives: Hereditary transthyretin amyloidosis with polyneuropathy (ATTR-PN) is a rare and multisystemic disease. Scarce evidence about its economic burden has been published, especially regarding carriers and early stage patients. To characterize these populations, a descriptive study was developed in Spain. Secondary endpoints were estimation of the use and costs of healthcare resource utilization (HRU) and estimation of indirect costs from a societal perspective. ***Methods:*** An observational, multicentric, descriptive and cross-sectional study was carried out during 2017-2020, to characterize healthy carriers of the pathogenic mutation in the TTR gen (HC) and stage I ATTR-PN patients (PA). HRU such as medical visits, diagnostic tests, and its associated costs were assessed. Unitary costs were obtained from official sources (€, 2021). Results are expressed as cost/resource utilization per individual per year. ***Results:*** The study included 105 participants: 86 HC and 19 PA. Direct costs were significantly higher in PA versus HC, being 2,293.67€ and 945.05€ respectively ($p<0.001$). Main expenses in both groups were due to internal medicine and neurology visits. Among diagnostic tests, electromyogram was the resource generating higher costs in both populations. Among indirect costs, no statistically significant differences were found, being 380.11€ for HC and 781.32€ for PA. Interestingly, while PA presented a higher number of sick day-leaves, HC showed higher number of lost workhours. Besides, the number of days worked with fatigue/pain were significantly different between both groups (5.47 and 53.95 for HC and PA; $p=0.034$). Finally, total costs (direct and indirect) of PA population were significantly higher than those of HC (3,074.99 vs 1,325.16€ respectively; $p<0.001$). Thus, PA generate an incremental burden of 1,749.83€ per patient per year when compared HC. ***Conclusions:*** In conclusion, both groups are generating a relevant burden in direct costs to the Spanish healthcare system, and in indirect societal costs.

POSC41
COST-EFFECTIVENESS ANALYSIS OF REMDESIVIR FOR THE TREATMENT OF COVID-19 HOSPITALIZED ADULTS IN MEXICO

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Objectives: Remdesivir (RDV) is the only antiviral treatment conditionally approved to treat COVID-19 hospitalized patients (1). In Mexico, RDV received an Emergency Use Authorization on March 2021 for hospitalized adults with a confirmed diagnosis of COVID-19 (2). This study assessed to conduct a CEA of the use of RDV in hospitalized patients compared to the standard of care (SoC) in the Mexican context. ***Methods:*** A combined decision tree with a Markov model was used to perform a CEA of treated hospitalized adults for COVID-19 with RDV. In the first stage, patients were followed for 28 days during the hospital stay with a decision tree that consisted of three nodes: 1) the decision between SoC or RDV; 2) whether patients received supplementary oxygen or not during the hospital stay, and 3) whether they remain alive or died. After the 28-days follow-up, in a second stage, patients who remain alive entered on a Markov model with two mutually exclusive health states (alive or dead) with one-year cycles. Probabilities, resource utilization, and costs (e.g., cost of hospitalization, monitoring tests, complementary medicines) were extracted from public governmental sources (3–6). Health outcomes (measured as Life-Years Gained -LYG) and costs were discounted following national guidelines (7). Deterministic and probabilistic sensitivity analyses were conducted. ***Results:*** A thousand adults were modeled. In the base case, RDV provided 0.7 more LYG and generated savings for 1,722 USD compared to SoC (0.91 LYG and -2,038 USD in probabilistic analysis). Thus, RDV is a dominant intervention to treat COVID-19. Results were consistent for all sensitivity scenarios but only for all patients with severe COVID-19 (ICER 2,386 USD), remaining as a cost-effective option. ***Conclusions:*** Given the potential clinical benefits of RDV, the model estimated that RDV represents a cost-saving option to the Mexican health system for hospitalized patients with COVID-19.

POSC43
HEALTHCARE RESOURCE USE AND ACTIVITIES OF DAILY LIVING STATUS AMONG ADULT PATIENTS WITH SPINAL MUSCULAR ATROPHY: A NATURAL HISTORY MULTICOUNTRY CHART REVIEW STUDY

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Objectives: Standards of care for spinal muscular atrophy (SMA) has historically included rehabilitation therapy, nutritional support, and/or surgical interventions. There is limited real-world data on healthcare resource use (HRU) among adult patients with SMA prior to nusinersen approval. ***Methods:*** This retrospective, multicountry (United States, France, Germany, Italy, Spain, United Kingdom) study collected real-world natural history data on patients ≥18 years old, diagnosed with SMA prior to January 1, 2012 and managed by participating physicians from January 1, 2012 - December 31, 2016. HRU including surgical procedures, rehabilitation therapy, mobility devices, inpatient and outpatient visits were analyzed descriptively. ***Results:*** The study population included 339 adult patients with SMA [66% male; mean age (range) 31 (18-79) years] from 76 sites. Mean (range) follow-up was 11 (2-46) years from SMA diagnosis to most recent visit during which 16.2% of patients had a record of scoliosis surgery, 15.9% any tendon release, 8.0% gastrostomy procedure, 3.8% orthopedic hip surgery, and 3.5% tracheostomy. From time of diagnosis to most recent visit, physical, occupational, and respiratory therapy was recorded for 49.3%, 21.8%, and 21.5% of patients, respectively. From time of diagnosis to most recent visit, the following mobility devices were used: light wheelchair use (31.0%), motorized wheelchair use (32.2%), walking aids (31.6%), and standing aids (20.6%). At the most recent visit, 23.3% of patients could not use the restroom alone and 25.4% could not dress themselves alone. Between January 1, 2015 – December 31, 2016, 14.5% had ≥ 1 hospitalization or emergency room visit, and 78.2% had an outpatient visit related to SMA. ***Conclusions:*** Based on a large sample size and diverse geographies, adult patients with SMA were found to require substantial treatment, caregiver support, procedures, and mobility aids prior to the availability of disease modifying treatment.

POSC44
EXTRA REGIONAL COVID-19 PATIENTS TRANSFERS: A RETROSPECTIVE ANALYSIS OF DISTANCE, TIME AND COST FOR TRAIN, HELICOPTER AND FIXED-WING AMBULANCES

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Objectives: The COVID-19 pandemic presents unique challenges to the transportation of critically ill patients. In France, between mid-March and mid-April 2020, 660 COVID-19 patients were safely transported from four regions towards six other regions and four neighboring countries using various modes of transport (plane, helicopter, train, boat). The study aimed to assess costs for these transfers and compare the different transport options. ***Methods:*** A cost analysis was conducted including the operating costs for a specific transport distance and time, as well as associated personnel costs. We measured costs for each type of transport system, and costs for specific distances or time in operation, in order to perform comparisons for short, moderate, and long transport distances. ***Results:*** Our preliminary findings indicated that using fixed-wing transport for patients was cheaper and more time-effective. For a reference distance of 500 km, which corresponds to the average distance traveled for such transfers, the cost of fixed-wing transport was around 1 625 € per patient. On the opposite, helicopters appeared to be the worst option (7 327 € per patient) whereas the train accounted for 5 136 euros per patient. In average, personnel costs represented around 13% of total costs. ***Conclusions:*** To our knowledge, few studies have investigated the costs of patient transfers during the sanitary crisis. This study includes the first comprehensive cohort of transferred patients during COVID-19 pandemic, in France, between mid-March and mid-April 2020. The mode of transport conditions the number of patients transferred and the associated operating costs. Because there is potentially inconsistent data collection for some modes of transport, our study carries several limitations. We were also unable to measure specific time intervals for the preparatory and system disinfection phases. Further research should be conducted to better inform decision makers.

POSC46
A COST-EFFECTIVENESS ANALYSIS OF PATIROMER FOR THE TREATMENT OF HYPERKALEMIA IN SPAIN

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Objectives: Optimal renin-angiotensin-aldosterone system inhibitors (RAASi) therapy has demonstrated to delay progression of chronic kidney disease (CKD), heart failure (HF) and hypertension. However, RAASi therapy is associated with an increased risk of hyperkalaemia (HK), leading to dose reduction or discontinuation of therapy and shortening its potential cardio-renal benefits. Patiromer is a novel therapy for HK treatment that maintains normokalaemia and also enables to maintain RAASi therapy. This study aimed to assess the cost-effectiveness of patiromer versus no patiromer for the management of HK in patients with CKD with or without HF from the Spanish healthcare perspective. ***Methods:*** A Markov model was developed to predict the natural history of disease for patients with stage 3-4 CKD with or without HF treated with RAASi, and evaluate the costs and benefits associated with the use of patiromer for the management of HK in a lifetime horizon. Clinical data and utility values were obtained from the OPAL-HK trial and published literature, and costs were gathered from national databases. The main outcomes of the model included total direct costs (expressed in €, 2021), quality-adjusted life years (QALYs), life years gained (LYG) and incremental cost-effectiveness ratio (ICER). An annual discount rate of 3% was applied to costs and health outcomes.