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Patients with ET have a high prevalence of comorbidities, which are highly associated with worse management. This study aimed to examine patient characteristics and comorbidities among ET patients with different treatments. Multiple comorbidities were highly prevalent among patients with ET and should be considered in the context of clinical decision making to optimize ET management.

**Neurological Disorders - Health Service Delivery & Process of Care**

**PND47 PHARMACOTHERAPY TREATMENT PATTERNS IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER**

**Abstract**

Objectives: Treatment patterns can vary substantially in patients with major depressive disorder (MDD) as they progress through multiple lines of therapy (LOT). This descriptive study examined treatment patterns in patients with MDD by the LOT using administrative claims data from the CVS Health® Claims Database. Treatment patterns were assessed for patients grouped using the Truven MarketScan Research Database, we conducted a retrospective analysis of patients (≥18 years) diagnosed with MDD (1/1/2013-9/30/2016), who received a new antidepressant or antipsychotic for MDD treatment during a pre-specified index window (01/01/2013 to 9/30/2016). Treatment combinations were assessed for patients grouped by number of LOT received (up to 6) with any combination of antidepressants, antipsychotics, anxiolytics, or sleep medications during the index treatment window.

Results: Overall, 500,520 patients were prescribed over 1,100 different unique combinations of antidepressant/antipsychotic medications. Among monotherapy (76%, median 177 days) was the most common index treatment approach, combination therapies (24%, median 214 days) were also used early in the patient treatment journey and became more common with increasing LOT (13% to 39% as LOT increased from 1st to 6th). Of patients receiving pharmacotherapy, those with more treatment experience were more likely to remain on any pharmacotherapy at 12 months (discontinuation rates decreased from 32% to 4% as LOT increased from 1st to 6th), while the ratio of patients who persisted on a given treatment increased by 7% from 1st to 2nd line treatment and subsequently decreased for all remaining lines. Conclusions: Our findings indicate that pharmacotherapy treatment strategies for MDD are inconsistent across treatment lines and are often augmented with other antidepressants, anxiolytics, or sleep medications. The increasing diversity of combination therapies with incremental LOT highlights the challenges that exist in following MDD treatment guidelines.

**PND48 REAL WORLD DATA AND COVID-19: HEALTHCARE IMPACT IN EMERGENCY CARE, STROKE EMERGENCY CARE AND STROKE-RELATED DEATHS IN CHILE**

**Abstract**

Objectives: This study evaluated healthcare utilization for patients with migraine in Chile during the COVID-19 pandemic. The study aimed to determine the impact of COVID-19 on healthcare utilization for patients with migraine in Chile. Methods: This is a retrospective study of patients with migraine who were admitted to hospitals in Chile during the COVID-19 pandemic. Results: A total of 5,286 patients met eligibility criteria. Median(SD) age was 70.8 [11.8] years, 49.1% were female, 37.1% had commercial insurance, 80.9% had Medicare Advantage, 26.0% did not receive any ET-related pharmacotherapy or refractory surgery (untreated), 71.3% received some pharmacotherapy (pharmacotherapy), and only 2.7% had refractory surgery (surgery) during the 12-month follow-up period. Conclusions: These findings indicate that pharmacotherapy treatment strategies for MDD are inconsistent across treatment lines and are often augmented with other antidepressants, anxiolytics, or sleep medications. The increasing diversity of combination therapies with incremental LOT highlights the challenges that exist in following MDD treatment guidelines.

**PND45 EPIDEMIOLOGY, TREATMENT LANDSCAPE, AND HEALTHCARE UTILIZATION FOR PATIENTS WITH MIGRAINE IN CANADA: A LITERATURE REVIEW**

**Abstract**

Objectives: Statistics Canada estimated 2.7M Canadians were diagnosed with migraine in 2010. Understanding the burden of disease and current treatment patterns is important for the development of new treatment strategies and improved patient care. The study objective was to describe the treatment landscape and clinical and economic burden of migraine in Canada via a literature review. Methods: A search strategy using key terms for migraine was executed in MEDLINE, Embase, and the Cochrane® Library between August 2010 and August 2020 for Canadian populations with migraine. Outcomes included prevalence, clinical or economic measures, and treatments. This review was conducted and reported in accordance with the PRISMA statement. Results: 3269 citations were screened, and 29 Canadian studies were included; 14 studies utilized data from the Canadian Community Health Survey. Statistics Canada (2014) estimated an overall migraine prevalence in Canada of 8.3%. Patients with chronic migraine had a greater burden of disease in terms of cost, resource use, and quality of life compared to episodic migraine. Most patients (74%) with chronic migraine had ≥2 comorbidities. Nine studies examined migraine treatment, with 70% of chronic and 80% of episodic migraines treated with acute medications, including 23% with codeine-containing analgesics and 11% with opioids. Most patients (82%) reported previously taking ≥3 types of migraine medications. Pain during attacks increased from 4% to 33% for Emergency and specialist visits increased by 14% and 5%, respectively, compared to controls, with an average of 24 general physician visits per patient per year, compared to 19 visits on average for controls. Conclusions: The burden of disease for patients with migraine in Canada is substantial. The medication utilization patterns and unemployment in this population highlight an important gap in existing treatment strategies. Likewise, the higher healthcare costs and reduced quality-of-life demonstrate an unmet need for more effective management.

**PND43 PREDICTORS OF 30-DAY READMISSION AND HOSPITALIZATION COSTS OF PATIENTS WITH HEPATIC ENCEPHALOPATHY IN THE US FROM 2010 TO 2014**

**Abstract**

Objectives: Hepatic encephalopathy (HE) is a complex and reversible neuropsychiatric syndrome that is associated with growing, substantial healthcare resource utilization. The primary aim of this study was to examine the demographics, clinical characteristics, readmission rate, and hospitalization cost of patients hospitalized with HE as well as to identify potential temporal trends. The secondary aim was to identify predictors of readmission and hospitalization cost. Treatment: A retrospective cohort analysis using all data within 6 months prior to and including the index windows. Results: The number of index hospitalizations increased with a significant trend from 34,967 in 2010 to 44,791 in 2014. Among them, an average of 16.8% were readmitted within 30 days each year. Predictors of readmission included male sex (OR: 0.95, 95% CI: 0.91-0.98), Elhixlaher readmission score >25 (OR: 0.86, 95% CI: 0.83-0.90), elective readmission (OR: 0.87, 95% CI: 0.83-0.93), primary payer (Medicare and Medicaid, OR: 0.87, 95% CI: 0.82-0.93), Other/self-pay OR: 1.32 95% CI: 1.21-1.45), number of diagnoses >13 (OR: 1.23, 95% CI: 1.17-1.28), and length of stay >4 days (OR: 1.19, 95% CI: 1.14-1.24). Conclusions: Our results indicate there is a need to implement better management strategies to improve outcomes in patients hospitalized with HE to reduce healthcare resource utilization, which will ultimately curb the increase in the economic burden associated with the disease.
Objectives: Stroke is a disabling condition and a leading cause of premature deaths in Chile. Before the covid-19 outbreak, access to first-line and second-line treatments was scarce. The covid-19 outbreak was pointed out as responsible for decreasing general emergency care, stroke emergency care, and stroke-related death rates, and there is a need to quantify those effects. Methods: A retrospective time series analysis using national real-world data was performed. The data were extracted from the records of emergency care and the deaths database published by the Ministry of Health for 2016-2020, for the public and private sector. Time series of emergency care, stroke care, confirmed-covid-19 cases, and deaths due to stroke were constructed and compared against the previous year and the average observed between 2016 and 2019 using ANOVA by year, by sex, and by age. Heat maps and box plots were generated to demonstrate the changes in the demand for emergency care. Results: Emergency care in Chile has decreased significantly (p<0.001) since the first confirmed case (44% less during the covid-19 outbreak compared to 2019). Admissions for stroke decreased 18% and 7% compared to 2019 and 2016-2019 period. In 2020, in January and February, care for stroke increased 8% and 3%, respectively. In March, at the onset of confirmed cases, there was a decrease of 30% and 16% in emergency care and stroke care compared to the previous year. Stroke-related deaths decreased 17% in all types of stroke and 6% for ischemic stroke when compared to 2019. Conclusions: Results demonstrate that access to stroke care has fallen in Chile during the covid-19 outbreak. Future studies are needed to quantify the effects on disease burden due to the lack of interventions. Authorities shall bring this information into the design of future strategies to avoid unnecessary and harmful lack of access for groups at risk.

PND51 PATTERNS AND CHARACTERISTICS IN OPIOID ANALGESIC USE FOR MIGRAINE IN US EMERGENCY DEPARTMENTS: ANALYSIS OF NATIONAL HOSPITAL AMBULATORY MEDICAL CARE SURVEY 2007-2018 DATA
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Objectives: Opioid analgesics are commonly prescribed for migraine management in emergency departments (ED) despite clinical guidelines warning against such practice. Despite severe policies and guidelines that have been implemented to prevent unsafe prescription opioid use and opioid-related adverse outcomes in the United States (US), little is known about opioid use patterns among migraine patients. We aimed to examine the trends, patient, and visit characteristics in opioid use for migraine treatment in US ED settings. Methods: A cross-sectional study of 2007-2018 National Hospital Ambulatory Medical Care Survey data was conducted for adult visits (≥ 18 years) with a primary ED discharge diagnosis of migraine. To obtain sufficient sample sizes and reliable national estimates, we examined the data across 3 time periods: 2007-2010, 2011-2014, and 2015-2018. We used multivariable logistic regression to examine the trends in the use of opioids and non-opioid migraine medications including ergots/triptans, antiemetics, antihistamines, acetaminophen/non-steroidal anti-inflammatory drugs (NSAIDs), corticosteroids, and intravenous fluids, separately. Results: There were 10.8 million migraine-related ED visits between 2007 and 2018. The majority of migraine-related ED visits with opioids were from patients aged 50-79 years (78.3%), female (84.7%), White (85.0%), and having severe pain (60.7%). Approximately 40% and 25% of migraine-related ED visits prescribed with opioids were paid by Medicare and Medicaid, respectively. Among migraine-related ED visits, a significantly declining trend was observed in opioids (2007-2010: 58.0%, 2011-2014: 49.5%, and 2015-2018: 36.0%; Ptrend<0.001). Conversely, increasing trends were observed in the following medications over time (all P<0.001): acetaminophen/NSAIDs (33.2% to 53.7%), antiemetics (43.4% to 64.1%), and corticosteroids (4.0% to 9.0%) from 2007-2010 to 2015-2018. Ergot/triptan use remained stable (10.0% in 2015-2018; Ptrend=0.55). Conclusions: Among migraine-related ED visits in the US, opioid analgesic use substantially decreased from 2007 to 2018, while acetaminophen/NSAIDs, antihistamines, and corticosteroid use increased significantly. Migraine-specific medications (i.e., ergots/triptans) were underutilized in ED settings.

Neurological Disorders - Methodological & Statistical Research

PND52 ESTIMANDS AND THE CHOICE OF METHODOLOGY IN MULTI-GROUP COMPARATIVE EFFECTIVENESS RESEARCH
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Background: It is increasingly appreciated that different analytic methods imply different estimands. For example, treatment effects estimated after propensity score matching are expected to apply more to the treated than to the comparator. This issue is only compounded as the number of study treatments, and thus possible regions of covariate non-overlap, increases. Using simple simulated data and a more complex case-study of the comparative effectiveness of disease-modifying therapies (DMTs) for multiple sclerosis, we motivate this issue using a graphical approach similar to Venn diagrams and discuss the impact of various analytic methods on the estimands produced. Methods: We generated data with three treatment groups and two continuous covariates. For the case-study, we identified new users of three core DMTs with relapsing remitting multiple sclerosis in an observational data source. Covariate balance was assessed with the standardized mean difference (SMD). Confidence ellipse plots based on bivariate t-distributions, which mimic Venn diagrams using observed covariate data, were generated for pairs of important continuous covariates to aid in visualizing estimands. Results: Bivariate confidence ellipse plots applied to simulated data allowed demonstrating that regions of mutual

PND50 PATTERNS OF HOME HEALTH CARE USE AND ASSOCIATED COSTS IN ELDERLY WITH ALZHEIMER’S DISEASE AND RELATED DEMENTIAS
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Objectives: To assess the effect of Alzheimer’s Disease and related dementias (ADD) on home health care use patterns and cost outcomes in older US adults. Methods: This retrospective study using the US Medical Expenditure Panel Survey (MEPS, 2010-2016) identified participants aged ≥ 65 years and diagnosed with ADD to examine the following outcomes: 1) home health care use, including prevalence, intensity, and provider type, and 2) annual home care costs. Older adults (≥ 65 years) without ADD were controls. A two-part model examined the effect of ADD on home care costs, and the MEPS was used to weigh person years for national estimates. Results: Of the 15,330 eligible participants, 4.9% reported ADD. Among the 15,330 eligible participants, 4.9% reported ADD. The prevalence of home health care use was 45.7% in the ADD group vs. 8.3% in the controls. Home care aides and nurses practitioners delivered 75% of the home health services. The average number of days per person who received home care was 108 in the ADD group vs. 56 in the control group (p<0.001). Annual home care costs were $5,508 in the ADD group vs. $713 in the controls (p<0.001). In the ADD group, Medicare was the largest payer ($2,968), followed by Medicaid ($1,400) for home health care. After adjusting for participants’ characteristics, those with ADD were five times more likely to use home health care than those without ADD (64.1% vs. 12.8%, p<0.001). Home care and medication costs were 28% higher than the control group after adjustment (p<0.001). Conclusions: Home care agencies provided a large proportion of home health care. Home care aides and nurse practitioners were major home health care providers. ADD increased the likelihood of home health care utilization and associated costs significantly.