

## Gastrointestinal Disorders – Health Care Use &amp; Policy Studies

## PGI25

## STRUCTURED MANAGEMENT STRATEGY VERSUS USUAL PRIMARY CARE FOR GASTROESOPHAGEAL REFLUX DISEASE: META-ANALYSIS OF FIVE EUROPEAN CLUSTER RANDOMIZED TRIALS ASSESSING HEALTH CARE UTILIZATION COSTS

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**OBJECTIVES:** Gastro esophageal reflux disease (GERD) is commonly associated with a significant adverse impact on the patient's quality of life, his/her employment record, and healthcare systems. The aim of this analysis was to conduct a pooled analysis of the data from five European studies (GERD Management Project) to assess the potential benefit for healthcare providers of a structured treatment pathway (STP) for the treatment of GERD. **METHODS:** We conducted a meta-analysis of five cluster randomised clinical trials comparing a new management strategy with usual care in patients with GERD conducted in Austria, Italy, Norway, Spain and Sweden (NCT00842387). The educational intervention on investigators was based on the GerdQ questionnaire to stratify adult patients with classical symptoms of GERD according to the frequency and impact of symptoms. The most effective acid-suppressive therapy (esomeprazole 40 mg once daily) was proposed to be used only in patients with the highest GerdQ symptom impact score ( $\geq 3$  of a possible 6). Calculations were performed using data on mean values for resource utilization (including emergency room visits, hospitalization, primary-care physician visits, specialist visits and endoscopies) multiplied by the unit cost of each variable. UK unit costs were applied to the entire European cohort. **RESULTS:** 1947 patients were included in the analysis, 944 (49%) on the STP group and 1003 (51%) on the usual clinical practice (UCP) group. In the STP group, GerdQ scores improved significantly more during therapy than in the UCP group. Patients in the STP group had lower overall healthcare costs, 107.59€ per patient/year, than those in the UCP group, 137.55€ per patient/year (i.e. 22% reduction in healthcare utilization costs). **CONCLUSIONS:** The implementation of a structured treatment pathway for the treatment of GERD based in the GerdQ questionnaire could considerably reduce the disease healthcare utilization costs compared with the usual clinical practice.

## PGI26

## PATIENT CHARACTERISTICS ASSOCIATED WITH USE OF ENTERAL VERSUS PARENTERAL ACID SUPPRESSIVE AGENTS IN INTENSIVE CARE UNIT PATIENTS

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**OBJECTIVES:** Administering acid suppressive therapy, AST (proton pump inhibitors, PPIs or H2 receptor antagonists, H2RAs) via enteral versus parenteral route in Intensive Care Unit (ICU) patients for stress ulcer prophylaxis (SUP) may save costs. As little is known on who can receive enteral vs. parenteral AST, our objective was to evaluate whether ICU patients on any oral medication or with an oro-gastric tube receive enteral versus parenteral AST. **METHODS:** In a retrospective study of electronic medical record data,  $\geq 19$ -year-old adult patients admitted to a Midwest Academic Medical Center's ICU and receiving an AST in 2008 were included. Patient data {age, gender, nonoperative/postoperative status, any oral medication use, oro-gastric tube, nothing by oral route (NPO), resource utilization variables (hospital days, ICU days) and AST-use (enteral/parenteral)} were collected. Statistical differences between enteral and parenteral AST (PPI and H2RA) patient groups were determined using Chi-square or Fisher's exact test and Wilcoxon-rank-sum tests. In multivariate logistic regression analyses, the association of patient characteristics (any oral medication use, oro-gastric tube, NPO) with enteral versus parenteral AST-use was tested.  $P < 0.05$  was considered statistically significant. **RESULTS:** 54% and 43% of PPI (n=392) and H2RA (n=203) patients, respectively received drug through enteral route. The enteral and parenteral H2RAs groups did not differ by any characteristics. The enteral and parenteral PPI groups differed significantly by median hospital days (8.0 versus 13.0), median ICU days (2.0 versus 4.0), and nonoperative/postoperative patient-status (55%/45% versus 41%/59%). In multivariate logistic regression analyses, any oral medication use increased the likelihood of enteral versus parenteral H2RA-use ( $P < 0.05$ ) and PPI-use ( $P < 0.0001$ ); however use of an oro-gastric tube was not significantly associated. **CONCLUSIONS:** To realize cost-effective quality of care, patients with an oro-gastric tube could receive enteral instead of parenteral AST and further study of cost savings from such use is underway.

## Mental Health – Clinical Outcomes Studies

## PMH1

## IS STIMULANT OR ATOMOXETINE UTILIZATION ASSOCIATED WITH NEUROLOGICAL ADVERSE EVENTS IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (ADHD)? A RETROSPECTIVE ANALYSIS OF PROPENSITY SCORE MATCHED DATA

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**OBJECTIVES:** This study examined comparative safety of stimulant versus atomoxetine with the risk of neurological adverse events in children with Attention-Deficit/Hyperactivity Disorder (ADHD). **METHODS:** The IMS LifeLink Health Plan Claims Database was used for this retrospective, propensity score matched analy-

sis of children and adolescents with ADHD on stimulant and atomoxetine. The study sample included children less than 18 years of age initiating stimulant or atomoxetine therapy between July 1, 2004 to December 31, 2005. Patients with stimulant and atomoxetine were matched on propensity scores calculated based on baseline characteristics. The neurological adverse events included tics disorder (ICD-9-CM code-307.2x) and seizures (ICD-9-CM codes- 345.xx, 780.3, 780.39, 780.31). Conditional logistic regression was used to account for the matched pair design. The final logistic model was adjusted for duration of therapy/persistence along with other covariates which were significant after matching. Sensitivity analysis was also performed using pharmacotherapy as the main outcome measure for management of neurological adverse events. **RESULTS:** The propensity score matched cohort consisted of a total of 7,424 children with ADHD (3,712-Atomoxetine users and 3,712-Stimulant users). Conditional logistic regression revealed that stimulant or atomoxetine use did not differ in terms of the risk of neurological adverse events development (Odds Ratio [OR]- 0.86; 95% Confidence Interval [CI]- 0.57-1.28). However, central nervous system pathology was significantly associated with the development of neurological adverse events (OR-2.87; 95% CI-1.19-6.92). Sensitivity analysis showed that stimulant use (OR-1.36; 95% CI- 1.18-1.56) was positively associated with the treatments for neurological adverse events. **CONCLUSIONS:** Stimulant use was not significantly associated with diagnosis of neurological adverse events compared to atomoxetine in children. However, sensitivity analysis revealed that the stimulant users had an increased chance of receiving treatments for neurological adverse events. The findings suggest that stimulant use can lead to neurological adverse events which are not documented in ADHD patients but are usually treated.

## PMH2

## RISK OF HOSPITALIZATION FOR PNEUMONIA ASSOCIATED WITH THE USE OF ATYPICAL VERSUS TYPICAL ANTIPSYCHOTICS IN A NATIONAL SAMPLE OF MEDICARE BENEFICIARIES

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**OBJECTIVES:** To evaluate the risk of hospitalization for pneumonia associated with typical and atypical antipsychotic use in an elderly Medicare population. **METHODS:** This retrospective cohort study used two years (2006-2007) of 5% national sample of Medicare claims data. Medicare beneficiaries with continuous Part A, B, and D enrollment in 2006-2007 and who initiated atypical or typical antipsychotic drug therapy during July 2006-June 2007 were identified from Part D claims data. Propensity score matching was used to control for potential confounding. A conditional logistic regression model stratified on propensity score-matched pair was used to compare the risk of hospitalization for pneumonia in new users of atypical vs. typical antipsychotic drugs within a 180 day follow-up period starting from the date of first prescription. **RESULTS:** A total of 15,637 new users of atypical and 2,337 new users of typical antipsychotic drugs were identified July 2006-June 2007. A total of 1,363 (7.6%) subjects had a hospitalization for pneumonia during follow-up. The proportion of hospitalizations was similar in the atypical (7.5%) and the typical antipsychotic (8.0%) groups. A total of 2,335 propensity score-matched pairs were obtained using the Greedy 5-1 matching algorithm. In the matched cohort, there were 186 (7.97%) pneumonia hospitalizations in typical users compared to 179 (7.67%) among atypical users. Typical antipsychotics users did not differ significantly from atypical users on the risk of pneumonia (odds ratio: 1.042, 95% CI: 0.843-1.288). Sensitivity analysis using propensity score as a continuous variable in a multivariable logistic regression model yielded similar results (odds ratio: 0.976, 95% CI: 0.828-1.150). **CONCLUSIONS:** The risk of hospitalization for pneumonia was similar for new users of typical and atypical antipsychotic drugs. While this indicates that there is no added safety concern for users of atypical antipsychotics, it also suggests there is no added advantage of atypical use, especially in patients at high risk for pneumonia.

## PMH3

## RISK OF HIP FRACTURES IN ELDERLY MEDICARE BENEFICIARIES USING ATYPICAL OR TYPICAL ANTIPSYCHOTICS: A PROPENSITY SCORE ANALYSIS

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**OBJECTIVES:** To study the association between the type of antipsychotic drug use and the occurrence of hip fracture in an elderly Medicare population. **METHODS:** Two years (2006-2007) of 5% national sample of Medicare claims data were used to conduct this population-based retrospective cohort study. Medicare beneficiaries with continuous Part A, B, and D enrollment in 2006-2007 and who initiated atypical or typical antipsychotic therapy July 2006 -June 2007 were identified from Part D claims data. All study subjects were followed for 180 days from index date, the date of first antipsychotic prescription. Propensity scores were calculated for each individual using pre-index demographics, comorbidities, and medication use. Users of atypical antipsychotics and typical antipsychotics were matched on propensity score using the Greedy 5-1 matching algorithm. Conditional logistic regression model stratified on propensity score-matched pair was used to compare the risk of hospitalization for hip fracture in new users of atypical versus typical antipsychotic drugs; sensitivity analysis was conducted using propensity score as a continuous, linear term in the unmatched study cohort using logistic regression. **RESULTS:** 15,637 new users of atypical and 2,337 new users of typical antipsychotic drugs were identified. 307 (1.7%) of all antipsychotic users had a hospitalization for hip fracture during follow-up. Of these, 40 were typical and 267 were atypical users. In the propensity score-matched cohort of 4,660 individuals (2,330 pairs), 40 (1.72%) typical antipsychotic users and 38 (1.63%) atypical antipsychotic users had a hospitalization for hip fracture during follow-up. The risk of hip fracture was not found