

for pregnant women suffering from symptoms of significant hyperacidity and GERD. The number of patients was a limiting factor and more studies need to be done to establish the therapeutic benefits of combination antacids in pregnant population.

#### GASTROINTESTINAL DISORDERS - Cost Studies

##### PGI6

#### A BUDGET IMPACT ANALYSIS TO ESTIMATE THE ECONOMIC IMPACT OF LACTEST FOR THE DIAGNOSIS OF HYPOLACTASIA IN SPAIN

Darba J<sup>1</sup>, Kaskens L<sup>2</sup>, Ramirez de Arellano A<sup>3</sup>

<sup>1</sup>Universitat de Barcelona, Barcelona, Spain, <sup>2</sup>BCN Health, Barcelona, Spain, <sup>3</sup>Ferrer Grupo, Barcelona, Spain

**OBJECTIVES:** To assess the economic impact of introducing LacTest<sup>®</sup>, a new drug test which determines the level of hypolactasia in adults and elderly with clinical symptoms of lactose intolerance on the Spanish market. **METHODS:** A budget impact model was developed using the perspective of the Spanish National Health System (NHS) with a 4-year time horizon. The model was populated with data on diagnostic tests for hypolactasia, health care resource utilization, unit costs and market shares. The potential number of diagnostic tests annually performed in Spanish hospitals was based on a study estimating the number of patients with clinical symptoms eligible for a diagnostic test among 45 Spanish hospitals in Spain. Diagnostic tests included in this study were the hydrogen breath test plus measurements of capillary blood glucose after an overload of lactose, intestinal biopsy, fecal pH test, genetic testing and LacTest<sup>®</sup>. Costs considered were diagnostic tests, laboratory tests, physician visits and time of health care personnel. All costs referred to EUR 2012, using a 3% annual discount rate. Direct medical annual costs per patient with each diagnostic test were estimated before and after the introduction of LacTest<sup>®</sup> in order to estimate the total annual health care costs. **RESULTS:** The Spanish population with clinical symptoms of hypolactasia eligible for a diagnostic test was estimated to be constant at 126,420 during the next four years. Total health care costs were estimated at €81.7 million without the introduction of LacTest<sup>®</sup> and at €89.7 million after its introduction. **CONCLUSIONS:** The introduction of LacTest<sup>®</sup> only shows a moderate increase in the total costs for the Spanish NHS. LacTest<sup>®</sup> though is a test with a high reliability which decreases the need for repeating the test and the cause for additional costs as is the case with some of the other diagnostic tests compared in this study.

##### PGI7

#### ADHERENCE TO 5-AMINOSALICYLIC ACID (5-ASA) THERAPIES IN ULCERATIVE COLITIS (UC): A UK BUDGET IMPACT ANALYSIS

Szende A<sup>1</sup>, Neves D<sup>2</sup>, McDermott JD<sup>2</sup>, Yen L<sup>3</sup>

<sup>1</sup>Covance, Leeds, West Yorkshire, UK, <sup>2</sup>Covance Market Access Services, Inc., Gaithersburg, MD, USA, <sup>3</sup>Shire Development LLC, Wayne, PA, USA

**OBJECTIVES:** Adherence with 5-aminosalicylic acid (5-ASA) treatments has been shown to be associated with a reduction in disease relapses in UC patients. The aim of this budget impact analysis was to explore and quantify how adherence with individual 5-ASA treatments may impact direct medical costs, through prevented relapses, in the UK. **METHODS:** A 1-year decision analytic budget impact model was developed to combine data from a UK-based adherence study of 5-ASA treatments with a chart review study on UC costs by relapse status in the UK. The model calculates the rates of disease relapses, remissions, and associated costs, based on adherence rates of each 5-ASA medication. The model also allows running simulations of relative changes in treatment utilization to show the associated budget impact from the perspective of the National Health Service (NHS). **RESULTS:** Higher adherence rates (48.3% for MMX Multi-Matrix System<sup>®</sup> [MMX] mesalamine; 40.7% for delayed release mesalamine [DRM] 800mg; 36.7% for modified release mesalamine [MRM]; 31.8% for controlled release mesalamine [CRM] 1000mg; 29.7% for controlled release mesalamine [CRM] 500mg; 29.6% for delayed release mesalamine [DRM] 400mg; 27.8% for balsalazide) were associated with lower hospitalization rates (6.6%; 7.3%; 7.7%; 8.1%; 8.3%; 8.3%; and 8.5%, respectively), lower annual hospitalization costs (£330; £365; £383; £404; £414; £414; and £422, respectively), and lower other medical costs, excluding 5-ASAs (£282; £292; £298; £305; £307; £308; and £310, respectively). The model showed that a hypothetical move from the current utilization mix of 5-ASA treatments to the 5-ASA with the highest adherence rate could save the NHS approximately £92,800 annually per 1,000 UC patients. **CONCLUSIONS:** As non-adherence in UC is associated with costly medical resource utilization, significant cost-offsets could be achieved within the NHS by favoring the 5-ASA treatment with the highest adherence rate.

##### PGI8

#### SECOND AND THIRD GENERATION FVIII TREATMENT RESOURCES CONSUMPTION BREAK-EVEN POINT: THE PASS STUDY RESULTS

Gringeri A<sup>1</sup>, Cortesi PA<sup>2</sup>, Fusco F<sup>3</sup>, Cristiani M<sup>4</sup>, Mantovani LG<sup>5</sup>, Turchetti G<sup>3</sup>

<sup>1</sup>Fondazione IRCCS Cà Grandà, Ospedale Maggiore Policlinico/University of Milan, Milano, Italy, <sup>2</sup>University of Milano - Bicocca, Monza, Italy, <sup>3</sup>Scuola Superiore Sant'Anna University, Pisa, Italy, <sup>4</sup>Charta fondation, milano, Italy, <sup>5</sup>Federico II University of Naples, Naples, Italy

**OBJECTIVES:** Inhibitor development is one of the most important and expensive adverse event in patients with severe hemophilia A. A different incidence between second or third generation FVIII determine different resource consumption in long term therapy. The Pass study aimed to assess the break-even point in patients treated with ADAVATE<sup>®</sup> or with another second or third generation (FVIII X), considering effects on direct medical cost attributable to different

inhibitors development. **METHODS:** A model based on Oldenburg 2010 study population characteristic (348 Pre Treated Patients; FVIII  $\leq$ 2%; no previous inhibitor stories) was developed comparing costs generate from ADAVATE<sup>®</sup> treatment vs "FVIII X". We considered a time horizon of 5 years and the National Health System's (NHS) point of view. In order to assess the validity of the break-even point estimate, a sensitivity analysis was conducted modifying the percentages of patients allocated to prophylaxis or on demand regimen. **RESULTS:** According to model results the overall cost during 5 years was: 243,966,787.44€ for ADAVATE<sup>®</sup> treatment and 223,402,102.06€ for "FVIII X" treatment. To gain the break-even point between ADAVATE<sup>®</sup> and "FVIII X", the number of patients who should develop inhibitors was 4.98(1.43%) in 5 years. If all patients were allocated to prophylaxis regimen, to gain the break-even point the number of patients who should develop inhibitors was 9.68(2.78%). On the other hand for on demand treatment it should be 1.29(0.37%). **CONCLUSIONS:** Considering the high cost generated by inhibitor development and the lack of direct comparing studies in scientific literature, the Pass Study provided interesting information for decision makers in order to manage properly patients care. Inhibitor development should be more considered during decision process, as an expensive adverse event in hemophilic A patients treatment. A direct comparing study is necessary to obtain more consistent results.

##### PGI9

#### PHARMACOECONOMIC EVALUATION OF ANTYHELICOBACTER THERAPY OF ULCERS DUODENUM IN UKRAINE

Iakovlieva L<sup>1</sup>, Gerasymova O<sup>1</sup>, Mishchenko O<sup>1</sup>, Bezditko N<sup>2</sup>, Kyrychenko O<sup>3</sup>

<sup>1</sup>National University of Pharmacy, Kharkiv, Ukraine, <sup>2</sup>National University of Pharmacy, Ukraine, Kharkiv, Ukraine, <sup>3</sup>National University of Pharmacy, Kharkiv, Ukraine

**OBJECTIVES:** Sequential antyhelicobacter therapy (A) is one of the ways to overcome Helicobacter pylori (H. pylori) resistance to antibiotics. The aim is compare the cost effectiveness ratio of different schemes of AT of first line: a sequential therapy (scheme 1) and traditional triple therapy (scheme 2). **METHODS:** Cost-effectiveness analysis was used. The schemes and their efficacy were taken from a clinical study which were conducted in a hospital in Kharkiv (Babak O.J., 2009). This trial involved 63 patients with peptic ulcers of the duodenum (PUD) associated with H. pylori. Scheme 1: the drugs were prescribed in 2 stages: the first (5 days) - rabeprazole (daily dose (DD) 40 mg), amoxicillin (DD 2000 mg), the second (5 days) - rabeprazole (DD 40 mg), clarithromycin (DD 1000 mg) and bismuthate tripotassium dicitrate (DD 480 mg). Scheme 2 included of rabeprazole (DD 40 mg), amoxicillin (DD 2000 mg), clarithromycin (DD 1000 mg) for 10 days. After administration of both schemes, the patients received rabeprazole (DD 20 mg) for one month. A criterion of efficacy was the number of patients (%) with H. pylori eradication: scheme 1 - 96.80%, scheme 2 - 72.00%. For determining the costs of the course of AT per patient only the costs of the drugs were taken into account. The prices of drugs were taken from the information system "Drugs" of Company "Morion" (February, 2012). The currency ratio of UAH to dollar (USA) on 01.02.12 was 7.98:1. **RESULTS:** The costs for the scheme 1 are 170.28 \$, for scheme 2 are 202.29\$. The first scheme (NER 175.91\$) 1.6 times is more cost effective than the scheme 2 (NER 280.96\$). **CONCLUSIONS:** The application of sequential antyhelicobacter therapy can provide effective and economically founded AT PUD in medical practice.

##### PGI12

#### COST OF DISEASE RELATED MALNUTRITION IN CROATIA - A HIDDEN COST IN THE HEALTH CARE CLOSET WANTS OUT

Benkovic V<sup>1</sup>, Kolcic I<sup>2</sup>, Ivcevic Uhernik I<sup>1</sup>, Krznaric Z<sup>3</sup>, Vranesic Bender D<sup>3</sup>, Stevanovic R<sup>1</sup>

<sup>1</sup>Croatian Society for Pharmacoeconomics and Health Economics, Zagreb, Croatia, <sup>2</sup>Faculty of Medicine, University of Split, Split, Croatia, <sup>3</sup>Centre for Clinical Nutrition, University Hospital Centre Zagreb, Croatia, Zagreb, Croatia

**OBJECTIVES:** Disease related malnutrition (DRM) and its risk are still highly prevalent in some patient populations, depending on patients' diagnoses and age, setting and assessment tools used. DRM is associated with increased morbidity and mortality, decreased QOL, frequent hospitalizations and increased health care costs. Moreover, the economic and human costs of malnutrition are avoidable. The purpose of the study is to estimate cost of DRM in Croatia by assessing direct costs related to hospitalizations, drug consumption, outpatient care in selected illnesses (IBD, gastric and lung cancers, chronic renal impairment and COPB). Selection was based on most evidential relations and available data. Secondary objective was to calculate and compare the total and per capita medical expenditures for people with DRM and identify cost saving potential. **METHODS:** Prevalence-based cost-of-illness methodology was used to estimate the direct costs (hospital, drugs, physician and institutional care) and indirect costs (sickness leave) associated with disease complications related to DRM, as well as patient monitoring and drugs. The analysis was oriented primary to adult patients receiving hospital in-patient, outpatient or specified community health-care services. **RESULTS:** The annual cost associated with adult malnourished patients in selected illnesses is estimated at over 100€ million. Most of this cost are in acute hospital (infections, rehospitalizations) and home care with nutrition support estimated to <10 % of spend. This cost is substantial, inclining to rise with population aging (older people have increased DRM risk). So far there has been no attention focused on the economic burden associated with DRM in Croatia or the potential for savings arising from improved detection and treatment of those at risk. **CONCLUSIONS:** Screening of malnutrition as well as better nourishing therapies, in sense of better adherence to guidelines, would not only evade mortality and morbidity, but save substantial resources.