column® treatment of moderate severe UC and CD patients is associated with cost offsets for surgery, hospitalizations, outpatient care and drugs and an increase of QALYs. The cost-effectiveness ratios remain within the acceptable range for treatments to be recommended for use in Sweden.

PGI9
COST-EFFECTIVENESS OF OMEPRAZOLE VERSUS GENERIC OMEPRAZOLE IN THE ACUTE TREATMENT OF REFUX ESOPHAGITIS IN SWEDEN
Wahlqvist P1, Sörngård H2
1AstraZeneca, Mölndal, Sweden; 2AstraZeneca, Södertälje, Sweden

OBJECTIVES: To assess cost-effectiveness of esomeprazole 40mg (SEK 14.68 / tablet: EUR 1 = SEK 9.27, June 15, 2005) once daily (od) versus omeprazole 20mg od at the lowest available generic drug price (SEK 4.32 / tablet) in the acute treatment of reflux esophagitis (RE) in Sweden. METHODS: A decision analysis model was used considering pooled effectiveness data from comparative clinical studies and patient management assumptions based on expert opinions. Results were analysed using an 8-week time horizon and reported separately including work productivity costs or direct medical costs (drugs, physician contacts, investigations) only. Utility values associated with having healed RE (0.84) or unhealed RE (0.69) were derived from a study using the rating scale method in patients with gastro-esophageal reflux disease (GERD). Estimates of GERD-related work productivity loss (absence from work and reduced productivity while at work) were derived from observed differences in productivity before and after treatment in another study. A probabilistic sensitivity analysis (PSA) on direct medical costs was used to assess robustness of results, along with additional analyses extending the time horizon beyond 8 weeks. An acceptable threshold of SEK 500,000 per quality-adjusted life year (QALY) gained was used in the PSA. RESULTS: When including direct medical costs only, the analysis resulted in mean additional costs of around SEK 200,000 per QALY gained by using the more effective acid inhibitory treatment strategy (esomeprazole). The PSA on the probability of esomeprazole treatment being below a SEK 500,000 per QALY gained threshold supported robustness of a conclusion that esomeprazole treatment is cost-effective. When work productivity costs were included, results indicated that the esomeprazole strategy is cost-neutral. Extending the time horizon resulted in further cost-effectiveness advantages for esomeprazole. CONCLUSION: Esomeprazole 40mg od is cost-effective compared with generic omeprazole 20mg od in the acute treatment of reflux esophagitis in Sweden.

PGI10
COST EFFECTIVENESS OF PROTON PUMP INHIBITOR TRIPLE THERAPY REGIMENS FOR HELICOBACTER PYLORI ERADICATION IN THE PRIMARY CARE SETTING IN IRELAND
Nagle V1, O’Morain C1, Bennett K1, Keeling P1, Barry M1
1National Centre for Pharmacoconomics, Ireland; 2Dublin, Ireland; 3St James’s Hospital, Dublin, Ireland

OBJECTIVES: To determine the relative cost effectiveness of proton pump inhibitor (PPI) based triple therapy regimens for the eradication of Helicobacter pylori (H. pylori) in the primary care setting in Ireland. METHODS: Using decision tree analysis the expected cost for each H. pylori eradication strategy was determined from the cost of each treatment option multiplied by the probability of that option occurring. Only direct costs relating to the primary care setting such as GP consultation and medication costs, extracted from the Monthly Index of Medical Specialties 2003, were included. Probabilities were obtained using the GMS prescribing database where all patients who received amoxycillin, clarithromycin and a PPI in the ERHA region in 2002 were followed for one year. A broad range of clinical and cost inputs was investigated by sensitivity analysis. RESULTS: The main outcome measure was the cost per asymptomatic patient for each therapeutic strategy. Depending on the regimen adopted, 40.8% to 46.1% of patients did not require any further medication in the year following H. pylori eradication treatment. The strategy of rabeprazole, amoxyccillin and clarithromycin was the most cost effective option with a cost of €466 per asymptomatic patient. Two way sensitivity analysis indicated that the cost of rabeprazole triple therapy and the duration of rabeprazole maintenance therapy would each have to increase by 30% before this strategy ceased to be the most cost effective option. CONCLUSION: This study indicates that the triple therapy regimen of rabeprazole, amxyccillin and clarithromycin is the most cost effective of the therapeutic strategies examined for the treatment of H. pylori infection in the community setting in Ireland.

PGI11
IBD: INDIRECT COSTS OF ILLNESS AND QUALITY OF LIFE IN GERMANY
Stark R1, Reitmeir P2, König HH1, Leidl R1
1GSF—National Research Center for Environment and Health, Neuherberg (bei München), Germany; 2University of Leipzig, Leipzig, Germany

OBJECTIVE: To determine the differences in indirect costs and quality of life between persons affected by Crohn’s Disease (CD) and those affected by Ulcerative Colitis (UC) as part of a cost of IBD study in Germany. METHODS: Members of the German Inflammatory Bowel Disease (IBD) Association (DCCV) were recruited by post to prospectively document their IBD-associated costs (sick leave, disability pensions, and medical resource use) in a cost diary over 4 weeks. General demographic information and IBD history were also reported. Health-Related Quality of Life (hrQoL) was determined using the EuroQol EQ-5D. Indirect costs were calculated according to national sources using the human capital approach. RESULTS: Cost diaries were returned by 483 persons (CD: 241; UC: 242) whose mean age was 42 years and average disease duration 13 years. Productivity losses were reported by CD (14%) and UC (15%) subjects and average sick leave was similar (CD: 1.2 days; UC: 1.5 days). However, more CD (19%) than UC (7%) patients received a disability pension. The mean 4-week indirect costs for CD were €266 (95%CI: 100, 433) higher than for UC (p < 0.002). The mean hrQoL of CD subjects according to EuroQol VAS scores was 5 points lower (95%CI: –8.3, –1.7) than for UC subjects (p < 0.004). CONCLUSIONS: In Germany, indirect costs of CD are significantly higher than those of UC and hrQoL of CD patients is significantly lower than of UC patients. For CD, factors decreasing occupational disability would decrease costs and since hrQoL is also determined by the ability to work productively, may improve hrQoL. Factors affecting indirect costs, which account for a large part of the costs of IBD, can have a large impact on the overall costs. Furthermore, these findings indicate that determinants of costs must be searched for and evaluated separately for each disease.

PGI12
THE COSTS OF ACUTE-ON-CHRONIC LIVER FAILURE—A BOTTOM-UP ANALYSIS BASED ON INDIVIDUAL PATIENT DATA
Hessel FP1, Mitzner S2, Wasem J1
1University of Duisburg-Essen, Essen, NRW, Germany; 2University of Rostock, Rostock, Germany
Rationale: Acute-on-chronic liver failure (ACLF) is a life-threatening acute deterioration of a chronic liver disease with severe jaundice and hepatic encephalopathy. There are no cost-of-illness studies of the treatment of ACLF available. OBJECTIVES: To determine the average cost of the treatment of ACLF and testing of important clinical variables for their predictive value for the treatment costs. Methodology: Based on the sample of all ACLF-patients treated in a large German university hospital from 1999 to 2001 detailed cost of the initial hospital stay and a three year follow-up period were determined. Data on resource use were collected from hospitals patient files and internal statistics as well as by standardized interviews and questionnaires to patients and their treating GPs. Costs were calculated from a German health care system perspective and standardized to EUR of 2002. Additionally to age, sex, aetiology and severity of liver failure another 15 relevant clinical variables were tested in single and multiple regression analyses. RESULTS: A total of 69 patients with ACLF could be identified. Mean costs per patient were €21,058; €11,259 for the initial hospital stay and €9799 for the following 3 years. Biggest influence had treatment with artificial liver support systems. Other significant variables in the model were renal dialysis and aetiology of the disease. All other variables including sex, age, severity of ACLF and several laboratory parameter did not have a relevant influence on the costs. CONCLUSION: A straight and relatively simple method to identify the main cost drivers for ACLF-treatment is presented. The results are absolutely plausible from a clinical point of view and stable to variation of the model structure. The results underline the necessity to differentiate the reimbursement systems for hepatorenal syndrome or additional renal failure, artificial liver support and the aetiology of ACLF.

THE IMPACT OF GASTROESOPHAGEAL REFLUX DISEASE ON WORK PRODUCTIVITY: A SYSTEMATIC REVIEW

Wahlqvist P1, Reilly M2, Barkun A2
1AstraZeneca, Mölndal, Sweden; 2Margaret Reilly Associates, Inc, New York, NY, USA; 2McGill University Health Centre, Montreal, QC, Canada

OBJECTIVES: Gastroesophageal reflux disease (GERD) is a chronic, potentially debilitating condition characterized by frequent and persistent heartburn and acid regurgitation. The objective of this study was to evaluate the effects of GERD on work productivity, defined as productivity loss due to absenteeism and reduced effectiveness while working (presenteeism). METHODS: Studies quantifying health-related work productivity loss in individuals with GERD were identified using systematic literature searches. Work productivity loss due to absenteeism was expressed as number of hours lost, and as the percentage of the total employed time. Presenteeism was expressed as number of hours lost, and as the percentage reduced effectiveness while at work. Overall productivity losses (absenteeism plus presenteeism) were valued in US dollars using the human capital method. RESULTS: Six publications covering five studies conducted in the USA, Canada and Sweden were eligible for inclusion. Reported work productivity losses among individuals with GERD ranged from 6% to 40%, and were primarily due to presenteeism (6%–40%) rather than absenteeism (<1%–6%). Work productivity impairment correlated with symptom severity, and was greatest in patients experiencing sleep disturbance due to GERD symptoms and lowest in GERD patients taking prescription medication. Acid-suppressive therapy improved productivity at work, especially in individuals with GERD-associated sleep disturbances. The mean overall productivity losses per employee with GERD were estimated at $51–$396 per week, assuming a 40-hour working week and average US wages. CONCLUSION: GERD has a substantial economic impact, primarily by impairing employee productivity while at work. The burden of lost productivity may be reduced by acid-suppressive therapy, especially in employees with nighttime symptoms of GERD.

WORK ABSENTEESM IN IRRITABLE BOWEL SYNDROME (IBS): MEASURING DAYS VS HOURS MISSED

Reilly M1, McBurney C2, Bracco A2
1Margaret Reilly Associates, Inc, New York, NY, USA; 2Novartis Pharma AG, Basel, Switzerland

OBJECTIVES: To compare the accuracy of two absenteeism measures (days missed and hours missed) for inclusion in economic evaluations of IBS. METHODS: 135 IBS patients recruited from five US gastroenterology practices completed the Work Productivity and Activity Impairment questionnaire for IBS (WPAI:IBS), which assesses absenteeism with hours missed, and also completed questions about days and partial days missed. Days and partial days were considered to be the equivalent of 8 hours and 4 hours, respectively. RESULTS: 125 patients were employed, had complete data, and were included in the analysis. A total of 6.4% of patients reported missing days from work due to IBS in the prior 7 days, with an overall absenteeism rate of 1.8%; 28.0% of patients reported missing hours, with an overall absenteeism rate of 4.3%. Among those reporting hours missed, 42.9% missed less than 3 hours, 34.3% missed 3 to 5 hours, and 22.9% missed 8 to 30 hours. When days missed was used to measure absenteeism, 77.2% of patients missed hours and 60.7% of time missed due to IBS were not counted; when hours missed was reported, all patients reporting days missed were counted. Combining partial days missed with days missed increased the correspondence between those reporting days and hours missed, but considerably overestimated absenteeism because partial-day absences were often less than 4 hours. Previous validation of the WPAI:IBS hours missed measure of absenteeism relative to measures of disease severity, verbatim responses and retrospective diaries, corroborates the inaccuracy of the days missed measure. CONCLUSIONS: Hours missed from work, not days missed, is a more accurate measure for capturing the partial-day absences characteristic of IBS patients. Other chronic disorders like IBS may exhibit a similar pattern of widespread absences of short duration, and that absenteeism may go undetected when days missed is the measure of absenteeism.

MEDICAL RESOURCE USE AND DIRECT MEDICAL COST OF CHRONIC HEPATITIS C VIRUS INFECTION (HCVI) IN BRAZIL

FONSECA MC, ARAUJO GTB
AxiaBio Consulting, São Paulo, Brazil

OBJECTIVES: In Brazil it is estimated that there are more than 3 million patients chronically infected with HCV, making this disease a major public health problem. HCVI leads to chronic liver disease states such as cirrhosis and the need for transplantation. There is little published data on the cost of HCVI in Brazil. The aim of this study is to investigate medical resource use and direct treatment costs for each state of HCVI infection from the perspective of the private medicine payers in Brazil. METHODS: Three Delphi panels were performed, one with hepatologists, one with intensivists and another with oncologists in order to delineate practice patterns and to obtain resource utilization for routine treatment and monitoring, adverse event management and other clinical parameters representative