ESOMEPRAZOLE VERSUS OTHER PROTON-PUMP INHIBITORS (PPI): CLINICAL AND COST EFFECTIVENESS ANALYSIS
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OBJECTIVES: To compare the clinical and cost-effectiveness of esomprazole and other PPI (omeprazole, lansoprazole, pantoprazole and rabeprazole) in patients with GERD. METHODS: The clinical effectiveness analysis according Cochrane Collaberation guidelines was performed. Cost-effectiveness decision model was performed from a payer’s perspective, with a time horizon of 8 weeks. RESULTS: 8, 13, 6, and 3 RCT comparing esomprazole to lansoprazole, omeprazole, pantoprazole and rabeprazole were included. Esomprazole 40 mg was significantly more effective compared to lansoprazole 30 mg and omeprazole 20 mg in healing reflux esophagitis after 4 and 8 weeks (OR = 1.25 and 1.29 vs. lansoprazole; OR = 1.84 and 2.10 vs. omeprazole). Esomprazole is also more effective than lansoprazole and omeprazole for variables evaluating reflux symptoms. Compared to pantoprazole 40 mg, esomprazole 40 mg was statistically significantly more effective in terms of healing erosive esophagitis after 4–6 and 8–10 weeks (OR = 1.35 and 1.36, respectively), time to reach sustained heartburn resolution and proportion of heartburn-free days. Result of a single trial showed that pantoprazole resulted in faster first-time relief from GERD-related symptoms than esomprazole. Based on a single study comparing esomprazole 20 mg and rabeprazole 10 mg in patients with non-erosive GERD, both treatments had similar efficacy in relief of symptoms. Triple therapy regimens either esomprazole or omeprazole were similarly effective in eradicating Helicobacter pylori. The safety analysis showed no significant differences in the frequency of adverse events between esomprazole and other PPI except for headaches, which occurred more frequently in the desloratadine group than in the lansoprazole group. The ICER for esomprazole per additional patient healed after 8 weeks was 7858 PLN (vs lansoprazole), 2608 PLN (vs lansoprazole) and 6274 PLN (vs pantoprazole). CONCLUSIONS: Esomprazole is at least as effective as other PPI in the treatment of GERD.
the median time to the first MMF claim of the MMF group. A multivariate logistic regression and a Wilcoxon test were employed to assess risk of GI medication use and total medical costs 1 year before and after occurrence of GI medication claim, respectively. RESULTS: MMF was received by 173 (74%) patients. GI medication use occurred in 139 (80%) of the patients in the MMF group and in 29 (48%) of the patients in the non-MMF group. Patients who received MMF were associated with a statistically significant increase in risk of GI medication use compared to patients who did not receive MMF (OR = 7.65, p < 0.0001). Patients using GI medications generated significantly greater costs compared to patients not using GI medications ($69,328 vs $48,301, p < 0.0001). CONCLUSIONS: Heart transplant recipients who receive MMF had 7.7 times greater risk of using GI medications compared to those who did not receive MMF, which leads to increased costs.

THE USE OF BUDGET IMPACT MODELLING TO ASSESS THE ECONOMIC CONSEQUENCE OF CHANGING THE PRESCRIPTION PATTERN OF PROTON PUMP INHIBITORS (PPI) IN SWEDEN

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OBJECTIVE: To assess the economic consequences of changing the prescription pattern of proton pump inhibitors (PPI) in Sweden by use of a budget impact model (BIM). METHODS: Data from published sources provided information about treatment effects of different PPIs and productivity losses due to upper gastrointestinal symptoms (GIS). Sale statistics at the county council level and official Swedish price lists were used to estimate drug costs. Data on wages were taken from Statistics Sweden and was used to estimate indirect costs. The BIM was flexible and allowed us to analyse (i) the drug budget impact in a particular county council of switching between different PPIs and (ii) the annual per patient drug cost and the indirect cost from treating patients with different PPIs during a specific time period. RESULTS: In the county council of Stockholm (1.9 million inhabitants) the annual PPI drug costs amount to about €11.5 Million of which 50% and 14% comprise of generic omeprazole and esomeprazole, respectively. The consequence of switching from generic omeprazole to esomeprazole for 30% of the patients would result in increasing the PPI drug costs by 11%. However, as the major part of the annual per patient costs comprise of indirect costs due to productivity losses and absence from work, esomeprazole only need to be 1–2 percent units more effective in reducing GIS per week than generic omeprazole to compensate for its higher price. CONCLUSION: The results indicate the importance of including both direct and indirect costs in BIMs when analyzing changes in drug prescription patterns.

COST-EFFECTIVENESS ANALYSIS OF ROTAVIRUS VACCINATION PROGRAMME IN THE UK

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OBJECTIVES: A pentavalent rotavirus vaccine to prevent rotavirus gastroenteritis (RVGE) in children will soon become available. The objective of the study reported here was to assess the health outcomes and the economic impact in the UK of a RV vaccination programme vs no programme. METHODS: A birth cohort was followed up to age 5 using a cohort model. Epidemiological parameters were taken from the REVEAL study (a prospective epidemiological study conducted in the UK, 2004–2005) and from literature. Costs were assessed from NHS and societal perspectives by combining health care resource utilization collected in REVEAL study and unit costs from official sources. ITT effectiveness of the vaccine was taken from a large worldwide clinical trial (70,000 children). Health outcomes included home care cases, telephone consultations, GPEmergency department visits, hospitalisations and nosocomial infections. A sensitivity analysis was performed varying the cost of the RV vaccine course between £80 and £100. RESULTS: The model estimates that the introduction of a RV vaccination programme with the pentavalent RV vaccine (90% coverage rate) would reduce the RVGE burden by 75% in the UK: 102,290 home care cases, 25,570 telephone consultations, 83,220 GP visits, 5660 Accident&Emergency department visits, 12,220 hospitalisations and 5040 nosocomial infections could be avoided. The RVGE cost was estimated at £29m and £69m from NHS and societal perspectives respectively. The introduction of a RV vaccination programme would reduce the RVGE cost by about 75% in both perspectives. For a vaccine course ranging from £80 to £100, the RV vaccination programme is associated with an incremental cost-effectiveness ratio that varies from