obtained from the derivation versus the validation samples. The construct validity of the DRCI was assessed by comparing it to only demographics, a comorbidity-index, and the revised Chronic Disease Score (CDS). Wilcoxon matched-pairs signed-rank test was used to determine differences between the median squared residual scores between the various risk-adjustment models. RESULTS: The correlation between actual and predicted costs between the derivation and validation samples was not statistically different for the three predicted outcomes. Age and sex accounted for 0.8% and 0.1% of the variance in total and ambulatory cost. The comorbidity index and the CDS individually explained approximately 6%–10% of the variance in total and ambulatory cost, respectively. The DRCI explained 6%–8% of the variance in total and ambulatory costs, and did significantly (p < 0.05) better than only demographics. The added variance explained by the incorporation of the comorbidity index or CDS accounted for 5%–8% of the variance in total and ambulatory costs, respectively. CONCLUSIONS: The predictive validity of the DRCI is equivalent to that of the CDS. When the DRCI was used along with the CDS, up to eight percent of variability in costs and utilization were explained. This may suggest that the DRCI and the CDS may be explaining different dimensions of a subject’s severity of diabetes.

PDB30

DEVELOPMENT OF A DIABETES RESOURCE CONSUMPTION INDEX (DRCI) USING VETERANS HEALTH ADMINISTRATION DATA

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OBJECTIVES: The fifth leading cause of death by disease in the U.S., type-2 diabetes places patients at higher risk for heart disease, blindness, kidney failure, extremity amputations, and other chronic conditions. The 2002 costs associated with diabetes were estimated at US$132 billion. Predictive models incorporating clinical measures of diabetes severity from clinical databases and their association to health care resource use and costs are needed for health plan resource planning and management. The purpose of this study was to determine the relationship between health care resource use and costs with diabetes-related clinical measures, and to develop a diabetes resource consumption index (DRCI). The DRCI consists of empirically derived weights to predict health care use among persons with diabetes. METHODS: The data was collected from four outpatient clinics within the Southern Arizona VA Health Care System. The DRCI models used diabetes severity measures to predict three health care resource outcomes: risk of hospitalization; total health care costs; and ambulatory costs. Severity of diabetes was defined as the function of annual HbA1C, creatinine clearance-rate, and cholesterol values. Comorbidity was defined as the number of concurrent secondary diseases. The log-likelihood ratio test and the Wald test-statistic were used to assess the performance of the models. RESULTS: A total of 367 diabetic subjects had complete information on diabetes-specific variables and represented the sample for this study. DRCI weights based on the magnitude of one year health care resource use and socio-demographic characteristics, ranged from −471.5 to 3081.2 for total health care costs, from −304.3 to 1582.1 for outpatient costs, and −0.19 to 0.93 for risk of hospitalization. The DRCI models predicted 7% and 9% of the variance in total and ambulatory costs, respectively. CONCLUSIONS: This study suggests an association between clinical measures of diabetes severity and health care resource and costs. Future studies are needed to validate this index in other settings.

GI DISEASES/DISORDERS—Clinical Outcomes Studies

PGI2

A SYSTEMATIC REVIEW OF THE EFFECTIVENESS OF TOTAL AND PARTIAL LAPAROSCOPIC FUNDOPLICATION FOR THE TREATMENT OF GORD

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With a prevalence in Western countries of around 15%, GORD is associated with considerable long-term morbidity and treatment costs. Since the introduction of laparoscopic surgery in the 1990s fundoplication has become a viable alternative to long-term drug therapy in difficult to treat patients. Partial fundopli-
cation was developed as an alternative to the complete wrap in order to reduce the prevalence of post-operative symptoms such as bloating and dysphagia. OBJECTIVE: To systematically review the effectiveness of two different surgical techniques of laparoscopic fundoplication (partial versus total) for the treatment of GORD in adults. METHODS: A systematic search of the literature was carried out. All randomised trials comparing total versus partial laparoscopic fundoplication were included. The main outcome measure was the number of patients who were symptom free at follow-up. Other outcome measures reviewed included clinical outcomes, PROs and QoL. In addition any long-term follow-up data were reviewed. RESULTS: Seven randomised trials identified met the inclusion criteria for this review. All trials included compared laparoscopic total fundoplication compared to partial fundoplication. Post-trial follow-up results varied between 3–6 months and a variety of outcome measures were reported. One study reported 12-month results. There was no reporting on quality of life, though three trials reported PROs. Dysphagia was more frequently reported in patients undergoing total fundoplication compared to partial wrap RR 2.82 [95% CI: 18.4, 4.32]. No significant differences in post-operative bloating was found between the two surgical techniques. There was no significant difference in the number of patients reporting either “good” or “excellent” outcomes between techniques RR 0.97 [95% CI: 0.89, 1.05]. CONCLUSIONS: Evidence from trials supports the view that both total and partial fundoplication are clinically effective for treating GORD. However, long-term efficacy and QoL data are needed to choose one technique over the other.

GI DISEASES/DISORDERS

GI DISEASES/DISORDERS—Cost Studies

COST-UTILITY ANALYSIS COMPARING ESOMEPRAZOLE WITH THE ORODISPERSIBLE FORMULATION OF Lansoprazole IN THE INITIAL TREATMENT OF REFLUX OESOPHAGITIS

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OBJECTIVE: To assess the cost-effectiveness of esomeprazole (Nexium) compared to lansoprazole (Zoton FasTab) in the initial treatment of reflux oesophagitis over 12 weeks from the perspective of the UK NHS. METHODS: A probabilistic decision analysis model was constructed using Treeage DATA™ 4.0 to depict the sequential management of patients with unhealed reflux oesophagitis. Treatment pathways were based on a published 8-week UK healing model, however the model time horizon was extended by an additional 4 weeks to ensure the costs incurred by patients who remained unhealed after 8 weeks were also included. Beta distributions for the 4 and 8 week healing rates were calculated from a meta-analysis of the two available head-to-head studies comparing esomeprazole 40mg (4 weeks – τ = 2087, n = 2763; 8 weeks τ = 342, n = 678) and lansoprazole 30mg (4 weeks – τ = 1984, n = 2760; 8 weeks τ = 347, n = 776) in the healing of reflux oesophagitis. These studies used the capsules formulation of lansoprazole. This data have been used, as the capsule and oro-dispersible formulation are bioequivalent. Triangular distributions were fitted to utility values reported by a study using the rating scale method in patients with gastro-oesophageal reflux disease. Estimates of resource utilisation were obtained from a survey of UK-based clinicians, and were multiplied by national published resource unit costs at 2003/04 prices. RESULTS: The mean cost per QALY gained with esomeprazole and lansoprazole were £1482 and £1633 respectively. Esomeprazole dominated lansoprazole (i.e. was more effective and less expensive) in 86.8% of the 10,000 Monte Carlo simulation patient iterations. Applying a willingness to pay threshold of £20,000 per QALY similar to that used by NICE indicates that esomeprazole is cost-effective in 98.9% of the 10,000 patient iterations. CONCLUSIONS: Esomeprazole is more cost-effective than the oro-dispersible formulation of lansoprazole in the initial treatment of reflux oesophagitis.