INTRODUCTION OF A NEW HEALTH TECHNOLOGY, POTENTIAL BEHAVIOURAL AND ORGANISATIONAL CHANGES AND POLICY IMPACT—ASSESSMENT OF NEW INFLUENZA TREATMENTS

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OBJECTIVES: The objective is to discuss and evaluate potential changes in patient, physician, and organisational behavior related to the introduction of a new health care technology (treatment of influenza with the anti-viral neuraminidase inhibitors). The changes evaluated are: 1) increased health care seeking by patients, due to the availability of antivirals for influenza; 2) Crowding out of inappropriate anti-biotic prescribing for influenza by antivirals; and 3) System change to allow telephone nurse prescribing rather than GP consultation. METHODS: Some unique characteristics of neuraminidase inhibitors has important implications for their cost-effectiveness in any given health care systems. A health economic decision model is employed in order to evaluate some of these potential changes when introducing treatment of influenza with neuraminidase inhibitors. The impact on cost-effectiveness and cost-utility of three different behavioural changes are investigated with the model as well as the base line cost-effectiveness and cost-utility of treating healthy adults in UK. RESULTS: The results of the economic modeling show that treatment of influenza in healthy adults with the anti-viral oseltamivir has incremental cost-utility ratios between £4,775/QALY (baseline) and £15,772/QALY (increased health care seeking by patients). CONCLUSION: In order to make a decision regarding introduction of influenza treatment with the new technology a number of issues ought to be addressed. These may be best dealt with in a full HTA where all aspects of introducing a new technology are investigated. By only evaluating certain aspects of the introduction of the technology, decision makers are likely to make decisions based on incomplete information. This may result in sub-optimal patient treatment and resource use in society.

COST-EFFECTIVENESS ANALYSIS OF PEGYLATED INTERFERONS COMBINED WITH RIBAVIRIN IN THE TREATMENT OF HEPATITIS C INFECTION IN FRANCE

Pin 38

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OBJECTIVE: The hepatitis C treatment with conventional interferon monotherapy has been under discussion because of its low response rate (10–20%). However, combination therapies involving ribavirin and the new pegylated interferons have raised the response rates beyond 50%. This study analyses the cost-effectiveness ratios for two different peginterferons (peginterferon alfa-2a and peginterferon alfa-2b) plus ribavirin compared with interferon-alpha 2b plus ribavirin. METHOD: A Markov model was developed to represent the natural history of hepatitis C and to estimate the incremental cost-effectiveness ratios for the two different peginterferons plus ribavirin compared with interferon-alpha 2b plus ribavirin. The results of two independent clinical trials comparing these treatment alternatives in naïve patients with HCV infection and no co-morbidity have been obtained from several publications. The model was applied separately to both trials. To evaluate the natural history of decompensated cirrhosis, 200 patients with decompensated liver disease from hepatitis C etiology were studied depending on the first decompensation event in two different hospitals in Spain. RESULTS: The results indicate costs of €20,751/life-year gained using efficacy data from the peginterferon alfa-2b trial and €10,350/life-year gained employing the peginterferon alfa-2a trial data. When a test is used at 12 weeks to facilitate an early detection of non-responders, the figures lower to €14,037 and €6,605/life-year gained, respectively. CONCLUSION: The main conclusion is that the combined treatment of peginterferon plus ribavirin is cost-effective showing peginterferon alfa-2a a better cost-effectiveness ratio than peginterferon alfa-2b. Efficiency decreases with advancing age and can be increased when strategies of early selection are employed to identify those patients who, without sustained viral response, would not benefit from the treatment.

DIRECT COST ANALYSIS OF HEPATITIS B INFECTION IN FRANCE

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The cost-effectiveness ratio was expressed as cost of life year gained with RSV prophylaxis. Sensitivity analyses were performed for the key probabilities. RESULTS: Palivizumab prophylaxis was estimated to cost €8903 per life gained as compared to €6594 for no preventive treatment. The incremental cost-effectiveness ratio of one life year gained amounted to €13,246 (PPP: €1 = 1.9 PLN). The sensitivity analysis indicated that the results were sensitive to the probability of hospitalization for RSV for no prophylaxis. CONCLUSIONS: Palivizumab, as compared to other widely accepted medical procedures, appeared to be cost-effective prophylaxis for the prevention of serious lower respiratory-tract infection caused by RSV in infants born at less than 32 weeks gestation in Poland.