PROPHYLAXIS AGAINST RSV, VARICELLA AND PNEUMOCOCCAL INFECTIONS: ECONOMIC-BASED DECISION-MAKING

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OBJECTIVE: To facilitate evaluation and comparison of cost-effectiveness results for varicella and pneumococcal conjugate vaccination with respiratory syncytial virus (RSV) prophylaxis using palivizumab by standardizing cost and benefit results from published studies.

METHODS: MEDLINE search identified English language cost-effectiveness studies for the three interventions. Prophylaxis recommendations by the American Academy of Pediatrics were examined. Results were discounted by 5% and costs were inflated to 1997 dollars using the Medical Care component of the CPI.

RESULTS: From the societal perspective, the cost per life year saved was $144,000 for pneumococcal vaccine and $34,000 for palivizumab RSV prophylaxis, but varicella vaccine saved money. From the payers’ perspective, the cost per life year saved was $278,000 for pneumococcal vaccine, $35,000 for RSV prophylaxis and $23,000 for varicella vaccine. Payers’ cost to avoid hospitalization for RSV infection was $13,000. An avoided varicella case cost $6 and it cost $2400 to avoid a major varicella sequela, and each case of pneumococcus avoided cost $103,000.

CONCLUSION: Prevention of avoidable childhood morbidity and mortality may cause incremental costs to payers but would be a rational policy from a societal point of view. Costs associated with RSV prophylaxis of high-risk infants with palivizumab do not appear unreasonable compared with the cost-effectiveness of two recent vaccines recommended for universal use in healthy children in the US.

THE FIRST STEP TO GENERATING UTILITY FROM QUALITY OF LIFE: A COMPARISON OF ITEM PREFERENCES AND ITEM SEVERITY

Pin23

The Recurrent Genital Herpes Quality of Life questionnaire (RGHQoL) is a needs-based quality of life (QoL) instrument specifically for use with recurrent genital herpes (RGH). It has been shown to have excellent psychometric properties. However, it cannot currently be used in the calculation of utility for economic analyses. Existing utility instruments cover symptoms and functioning, rather than QoL. Concern has been expressed over their relevance for RGH and, consequently, their ability to show differences between interventions. The aim of this project is to explore the potential for using the RGHQoL to produce meaningful utility scores. The first stage was to investigate whether a preference elicitation exercise was required or whether RGHQoL responses could be incorporated directly into utility analyses. This paper presents findings from the first stage.

METHODS: Structured interviews were conducted with 100 RGH patients. Patients undertook preference exercises (paired comparison and ranking) with six RGHQoL items and completed the RGHQoL. Thurstone’s law of comparative judgement was used to calculate item preference weights. These were compared with item severity weights derived via application of the Rasch model to RGHQoL responses.

RESULTS: Item ordering of severity was: B-E-D-C-A-F (paired comparisons), B-C-D-E-A-F (ranking) and F-A-D-C-B (Rasch severity). The paired comparisons and ranking exercises resulted in different orderings of some items, even though the methods are considered direct alternatives for eliciting preference information. The Rasch severity and preference weights provided very different orderings. For example, the most severe item according to patients’ responses to the RGHQoL was judged the least severe in the paired comparison and ranking situations.

CONCLUSIONS: The results suggest that individuals’ ratings of what would have the most impact on them are very different from what actually has an impact. RGHQoL responses cannot be used directly in place of preference elicitation.

THE DEVELOPMENT AND VALIDATION OF THE INFLUENZA DAILY DISRUPTION QUESTIONNAIRE (IDDQ)

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OBJECTIVES: This paper reports on the development of and psychometric validation of the Influenza Daily Disruption Questionnaire (IDDQ), a short new instrument
to measure the disruptive effects of influenza on daily activities.

METHODS: People with a previous influenza episode were recruited by newspaper advertisement to discuss the effects of influenza on their daily activities using a semi-structured interview technique. Each interview was transcribed, and a list of statements was generated via content analysis. A draft instrument was then developed for pilot testing. A cognitive debrief was included as part of the pilot test to gain a better understanding of patient's evaluation of the adequacy and relevance of the questionnaire. The final IDDQ was then produced. The IDDQ was administered in a clinical trial of influenza treatment. The psychometric properties of the instrument will be reported.

RESULTS: Twelve respondents were interviewed for the drafting of the IDDQ, while another ten were used in the pilot testing of the draft eight-item instrument. On the basis of the pilot testing, one item was re-ordered, five items were slight re-worded, and two items were left unchanged. The final version of the IDDQ has eight items, each relating to the effects of influenza on disruption of specific daily activities: self-care; shopping; housework; care for others; exercise; social life; hobbies, and work/school/college. Each item is scored on a five-point, Likert-type response scale, rated attitudinally from completely agree to completely disagree.

CONCLUSION: This paper describes the successful development of a multi-item questionnaire to measure the effects of influenza on disruption of daily activities. Psychometric properties of the IDDQ will be presented.

KIDNEY & URINARY DISEASE

COST-EFFECTIVENESS ANALYSIS OF THREE SURGICAL TREATMENTS FOR FEMALE STRESS URINARY INCONTINENCE

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OBJECTIVE: To compare the cost-effectiveness (CE) of three competitive surgical procedures for female stress urinary incontinence (SUI). The three procedures are retropubic urethral suspension (Burch), urethral sling, and a new procedure using SURx technology. The study population consists of women aged 18 to 85 years who have a confirmed diagnosis of type I or type II genuine SUI and a planned surgical treatment procedure. The perspective of commercial third-party payers is taken for this study.

METHODS: A decision model was developed to compare the costs and effectiveness of the three treatment strategies for SUI. A hypothetical woman in the study population is treated with one of the three treatment alternatives and tracked over a period of 12 months. The CE ratio was defined as cost per cure. Only direct medical costs were included and estimated by charge data (in year 2000 dollars). The costs, effectiveness, and outcome probabilities were collected from InPatientView, the HCUP Nationwide Inpatient Sample, HCCA Physician Fee & Coding Guide, the literature, SURx clinical trials, and expert’s suggestions.

RESULTS: The SURx procedure has the lowest costs ($11,757.22) and the highest effectiveness (0.94). The CE of the SURx, Burch, and Sling procedures was $12,539.70, $13,167.85, and $13,736.07 per cure, respectively. Burch and Sling procedures were dominated by SURx treatment. The incremental CE of Sling was $52,310.61 per additional cure relative to Burch. The CE ratio was sensitive to the hospital and physician costs of each procedure and the SURx cure rate. The threshold value of the SURx cure rate was 62%.

CONCLUSIONS: SURx technology for treatment of women with type I or II genuine SUI is the most cost-effective treatment option as compared to the Burch and Sling procedures. Therefore, SURx may be an appropriate first-line therapy for SUI.

AN ECONOMIC MODEL OF UNSTABLE BLADDER IN ITALY

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OBJECTIVE: An economic model was developed to estimate the comparative cost-effectiveness of treating unstable bladder (UB) with tolterodine immediate-release (2mg bid), oxybutynin (3mg bid) and “no treatment” in Italy. The model uses a one-year timeframe and the payer perspective.

METHODS: The treatment population was based on the percentage of patients seeking treatment in Italy. The treatment population was divided into successfully treated patients (STP) and patients failing treatment (PFT). The percentage of STP was calculated from clinical efficacy adjusted by annual persistency. For each group of patients, five categories of costs were identified: drug costs; incontinence pads; physician visits; lab tests/diagnostics, and associated comorbidities. Resource utilization and costs were obtained from the National Health Service, diagnostic and hospital codes (diagnostic related groups) and expert medical panels.

RESULTS: The prevalence of UB sufferers in Italy is estimated to be 12% in 2001 (approximately 7 million people), with only 23% of those patients seeking treatment. STP use fewer pads per day, visit physicians more frequently, have fewer lab tests/diagnostics, and experience fewer comorbidities than PFT. Efficacy is similar between tolterodine and oxybutynin. Persistence on therapy is higher for tolterodine compared to oxybutynin (70% for tolterodine, 19% for oxybutynin). As a result, effectiveness is higher for tolterodine than for oxybutynin (42% for tolterodine, 9.5% for oxybutynin, and 0% for “no