

not. Thus the higher resource consumption within the same specialty is recognized by a weighting factor incorporated into the existing practice expense formula. This adjustment to the payment formula would achieve equitable recognition of resource consumption and assist in ensuring access to proper care by beneficiaries.

PMCI1

COMPARING DIFFERENT APPROXIMATION METHODS FOR REMAINING LIFE EXPECTANCY IN DECISION TREES

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OBJECTIVES: Remaining life expectancy (RLE) and quality-adjusted life expectancy (QALE) are standard outcomes of decision-analytic Markov models, but their evaluation in decision trees is less straightforward. We compared Gompertz approximation (GPA) and Declining Exponential Approximation of Life Expectancy (DEALE), using life table method as gold standard. **METHODS:** All analyses were performed for additive and multiplicative models for disease-specific mortality rates (DSM). Background mortality was estimated from statistical life table data. In our base case analysis, we set the mortality rate difference in the additive model being twice the background mortality at age 45. We set the relative mortality rate ratio to three in the multiplicative model. We used 1) the formulas by Pollard based on the Gompertz function, and 2) the DEALE formulas to calculate undiscounted and discounted RLE and QALE (3% annual discount rate). Results were compared to actuarial life table analysis. Bias was defined as percent deviation from the sum of RLE for ages 30–89. DSM and discount rates were varied in one-way sensitivity analysis. **RESULTS:** Both approximation methods underestimated undiscounted RLE for both, the additive and multiplicative model. Base case results for men: for the multiplicative model, GPA (bias –4%) performed better than DEALE (–49%), whereas for the additive model, DEALE (–6%) was superior to GPA (–25%). Results for women showed similar patterns regarding magnitude and direction of bias. The use of time-independent disease-specific utility decrements yielded similar patterns for QALE. When varying DSM in sensitivity analysis, bias was positively correlated with DSM, but bias direction (sign) and ranking of both methods did not change. Similarly, changing discount rates did not alter the bias pattern. **CONCLUSIONS:** Based on our simulations, the Gompertz function should be preferred for multiplicative models and the DEALE approach for additive models. The magnitude of the bias depends strongly on model parameters.

PMCI2

EVALUATING DRUG SAFETY USING STOCHASTIC SIMULATION MODELS

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OBJECTIVES: To introduce the application of stochastic simulation models in drug safety and demonstrate how the population impact of a drug's safety profile, and other "what if" scenarios, can be quantified. **METHODS:** The patient group is defined according to the epidemiology of the condition. This group will form the cohort that will be followed up over a specified period. Baseline risks of the events and death, in the absence of drug exposure, are then assigned to each patient according to age, sex and other relevant risk factors. These parameters are obtained from available studies. Random times to each event and death are generated for each patient by applying a model derived from the exponential distribution; the unique parameter is the

risk of each event. Case fatality is randomly assigned. Following a non-fatal event during the simulated follow-up, the risk of recurrent and related events is updated. This cohort provides the expected number of events and forms a comparator cohort. Subsequently, scenarios of drug exposure, or channeling associated with drug use, are created and compared with the comparator cohort. **RESULTS:** Drug exposure scenarios are modeled by applying relative risks "RR" to each patient's baseline risks. The RRs associated with drug exposure may be sought from studies or may represent "what if" scenarios. Channeling can be modeled by altering the composition of the patient group. Tabular and graphical summaries of the net effect of drug exposure can then be created. **CONCLUSIONS:** This approach incorporates relevant epidemiological data into a single framework, offers the opportunity of evaluating potential drug safety issues and may be applied to other aspects of drug risk-benefit.

PMCI3

DEVELOPING THE EUROPEAN NETWORK OF HEALTH ECONOMIC EVALUATIONS DATABASES (EURONHEED): THE ACTIVITIES OF ONE CENTRE TO FULFILL BOTH INTERNATIONAL AND LOCAL NEEDS

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OBJECTIVES: EURONHEED is an EC-financed project to develop a European Network on Health Economic Evaluation Databases (2003–2005). The EURONHEED database will consist of bibliographic records of all published articles regarding health services evaluation for the countries covered by the network. It will also contain structured abstracts (including critical commentaries) of all publications describing full economic evaluations (mainly cost-effectiveness studies). This database will be publicly accessible via the internet at no charge. This network presently consists of seven academic centres throughout Europe. We describe the activities of one centre (Netherlands) in the context of this initiative. **METHODS:** Each EURONHEED centre will develop and maintain a local database covering one region. To ensure that individual databases can be combined to create a larger "meta-database", all centres will use a general methodology and database structure. The approach used is based on two existing databases: CODECS (Collège des Economistes de la Santé (CES), Paris) and NHS EED (Centre for Reviews and Dissemination, York, UK). **RESULTS:** Both have been operational for years and are already accessible. The EURONHEED group has developed a common strategy for the management and maintenance of the databases. To "localise" this strategy, we have developed a 10-step system, from literature searching to publicly accessible abstracts. This system also includes internal quality assurance and recordkeeping. We have also contacted 27 institutions in The Netherlands and Flanders and requested lists of all recent publications. This will help to ensure the identification of all relevant publications regarding health services evaluation in The Netherlands. **CONCLUSIONS:** Both our local database and the whole EURONHEED database will soon be accessible (Dec 2004) for both local and European users. Local decision-making will be supported by easy identification of all Dutch publications. Moreover, use of a common methodology and database structure will allow searches of the entire EURONHEED database.