OBJECTIVES: In 2002, the three Local Health Authorities (LHAs) of Bologna province (Emilia-Romagna region, Italy) began an outreach visits program aimed at modifying NHS prescriptions of specific drugs through evidence-based information packages and prescribing feedback. Aim of this study is to evaluate the impact of the pharmacist’s outreach visits program comparing Coxib prescribing volumes between the intervention and three control LHAs of the same region (Parma, Ferrara, Imola).

METHODS: Prescribing databases were available for both intervention and control LHAs from October 2000 to October 2003; time series data of Coxib monthly consumption were expressed in DDD’s. For each LHA, 2 time series were considered: the first, based on observed data, plots the real DDD’s trend over 36 months; the second, expected, fits the time series until the intervention date—November 2002—and subsequently forecasts the forthcoming 12 months estimating DDDs under the hypothesis of no intervention. Data analysis was performed using SAS/ETS module (Estimating Time Series) of SAS System: expected time series were computed with ARIMA intervention modelling.

RESULTS: Since November 2002, all monthly DDD’s observed in the intervention LHAs lie under the lower 95% confidence interval of the estimated DDD’s forecasted by the model; vice versa, since November 2002, all monthly DDD’s observed in the control LHA’s lie within the 95% confidence interval of the forecasted data; this results show a significant reduction in prescribing volumes for the intervention LHA’s.

CONCLUSIONS: Use of ARIMA intervention modelling for drug prescriptions time series may be a useful and easy to understand way of assessing the impact of drug information programs in terms of prescribing modifications.

ASP PLUS SIX PERCENT IN 2005-A CONCEPTUAL VIEW OF FUTURE PHYSICIAN PAYMENTS FOR DRUGS AND THEIR ADMINISTRATION IN THE OFFICE SETTING

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OBJECTIVES: In 2005, the Medicare Prescription Drug, Improvement and Modernization Act (MMA) of 2003 requires payment for drugs administered in the physician’s office at a new rate of average sales price plus 6%. This study provides a conceptual view of the change and suggests a conceptual modification.

METHODS: When the MMA imposed the new drug payment method, it also increased payment for drug administration. We postulate these relative weights used for the fee increases are diluted because they are specialty-specific rather than specific to practice type. This dilution defeats the original purpose of resource-based practice expenses. EVALUATION OF RESULTS: Resource-based methods for 2005 related to drugs and their administration were collected and deconstructed. Legislative rationales for the new drug payment method and for the differential in transitional procedure payments (32% add-on in 2005 versus 3% add-on in 2006) were identified. Computations utilizing the new methods were evaluated for indications of resource-based level of effort applications. CONCLUSIONS: Because the drug payment method is new and untested, we estimate a 2-year implementation period is needed before evaluations can occur. We also believe the present formula for indirect cost allocation within a specialty does not sufficiently distinguish between a practice that provides these high-technology drugs (high resource consumption) versus other practices that do not (lower resource consumption). We propose a new add-on component within the practice expense formula. This new component provides the practice that administers high-technology drugs with a higher indirect cost weight than a practice that does
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 to 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 modeled by altering the composition of the patient group. 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.