RESULTS: Varying the compliance rates between 95% and 70% resulted in the average annual drug costs per patient ranging between €609 and €911 (49.6% difference). Sensitivity analyses of published drug-cost ranges between $400 and $821 for NVF and $800 and $1642 for VF caused average annual drug costs to vary by 51.8%. Reexamining the 94% compliance assumptions of a recently published report found that the $1.1 billion estimate for treating HIV/AIDS in Africa may underestimate costs by more than 28%.

CONCLUSION: Given that studies have demonstrated a high degree of variability in HIV/AIDS drug compliance in Africa, future cost studies should examine the impact of varying compliance rates on their results.

PIN5

COST-UTILITY ANALYSIS OF A PNEUMOCOCCAL/MENINGOCOCCAL COMBINATION VACCINE FOR INFANTS

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OBJECTIVE: To estimate the cost-utility of universal vaccination of infants with four doses of a combined 9-valent conjugated pneumococcal/6-valent outer membrane vesicle meningococcal B/C vaccine in the Netherlands, from a societal perspective.

METHODS: A decision analysis model is employed to estimate the health outcomes and costs of the vaccination program. Data were derived from the Netherlands Reference Laboratory for Bacterial Meningitis, PRISMANT Healthcare, national and international literature, and an expert panel. Direct costs and productivity costs (friction cost method) are considered. Future costs and QALYs are discounted at 4%. Cost-utility is expressed as net costs (in 1998 €) per QALY gained. For the baseline, a vaccine dose price of €20 and vaccine dose administration cost of €5 are assumed. The study fully corresponds with the Dutch guidelines for pharmacoeconomic research.

RESULTS: The vaccination program is estimated to cost €18,741,600, to prevent 27 deaths and 16 severe sequelae (e.g. seizures, spasticity, and mental retardation), and to avoid €7,546,600 in expenses per year. It would render 735 QALYs per year at a cost-utility of €15,200 per QALY. The break-even dose price of the vaccine is €5.7. These results are sensitive to the vaccine price, the vaccine effectiveness, and the vaccine coverage against other meningococcal serosubtypes and pneumococcal serotypes. Excluding the productivity costs has a limited influence.

CONCLUSIONS: The combination vaccine has not only a favourable cost-utility ratio when compared to other vaccines, but also averts a significant number of deaths and severe sequelae. Therefore it would be a promising candidate for national immunization programs.
Abstracts

PHARMACOECONOMIC EVALUATION OF IMIQUIMOD (ALDARA) FOR THE TREATMENT OF EXTERNAL GENITAL WARTS IN A DUTCH TREATMENT ENVIRONMENT

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OBJECTIVE: To assess the cost-effectiveness of Aldara (Imiquimod) 5% topical cream versus other therapies for the management of external genital warts (EGWs) in a Dutch treatment environment.

METHODS: An economic model is presented that utilizes a two-stage therapy sequence. Choice of initial and subsequent therapy was based on the results of a recently completed chart review of three dermatology clinics in the Netherlands. This chart review provided valuable guidance regarding treatment switching resources used (i.e. average number of patient visits) and costs associated with the management of EGWs. Sustained clearance rates were incorporated into the economic model based on published literature of key clinical trial results. Costing was based on nationally available cost estimates for the Netherlands as costs based on chart reviews were site specific and hence were not appropriate for use.

RESULTS: Estimated average costs per successful clearance for Aldara plus cryotherapy were 1,128 DFL (€512) compared with 1,455 DFL (€660) for the next most cost-effective therapy sequence—Condylone (first line) plus cryother-

apy (second line). In terms achieving the therapeutic target of 50% clearance, only sequences in which Aldara was used as first line therapy achieved this.

CONCLUSION: The results of the cost-effectiveness analysis demonstrated that Aldara (as first line therapy) plus cryotherapy (second line) was the most cost-effective therapy sequence in the Netherlands.

A COST-BENEFIT ANALYSIS OF INFLUENZA VACCINATION IN A COMPANY IN ITALY (ENI SPA)

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OBJECTIVE: To estimate costs and benefits of a preventive influenza vaccination in a group of employees of Snamprogetti (an Eni-group company), to define a scheme of cost-benefit analysis to be used for other strategies of vaccination and in other contexts.

METHODS: In an observational study conducted from October 1999 to June 2000, 153 employees (about 10% of the whole staff of Snamprogetti) voluntarily received the vaccine, and were compared to 153 non-vaccinated employees working in the same context and matched for age and gender. The outcome was evaluated by checking absentee records from the personnel department and determining the causes, including influenza. Costs and benefits of the influenza vaccination from the Snamprogetti point of view were subsequently calculated.

RESULTS: The influenza vaccination strategy reduced absence from work by 77% and has decreased the loss of working days by 82%. The relationship between the benefits of the vaccination strategy (less working days lost) and its cost was 12.12. Convenience also becomes evident following sensitivity analysis, which considered the mean cost of a working day for the employees enrolled, and showed that the cost-benefit ratio was 9.45.

CONCLUSIONS: The results of this study suggest that implementation of an influenza vaccination strategy in Snamprogetti was cost effective. The cost-benefit analysis used in this study could also be used for other vaccination strategies and in other contexts.