**PIN 32**

THE POTENTIAL EPIDEMIOLOGICAL AND ECONOMIC IMPACT OF A NEW COMBINATION VACCINE AGAINST MENINGOCOCCAL B AND C AND PNEUMOCOCCAL INFECTIONS IN THE NETHERLANDS

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OBJECTIVES: Worldwide, a large burden of invasive bacterial infections in infants is caused by meningococcal B, C and pneumococcal infections. In this presentation, the potential impact of a neonatal program with a newly developed combination vaccine in the Netherlands is analysed. METHODS: A decision analysis framework was developed using epidemiological and health care resource use data from 1996–2001. This model is used to estimate costs, benefits, and health gains associated with vaccinating all newborns. In the resulting cost-effectiveness analysis, the societal perspective is taken. RESULTS: Annually, on average 663 cases of invasive pneumococcal and meningococcal B and C infection occur in infants aged 0 to 10 years. Introduction of the combination vaccine would prevent 233 cases of meningitis and 115 cases of bacteremia per year. Additionally, 3020 cases of pneumococcal pneumonia and 38,870 cases of otitis media would be prevented. Vaccination saves 34 lives per year and prevents 69 cases of severe sequelae. This translates into 845 life years gained, or 999 quality adjusted life years gained. Next to these health gains, vaccination will prevent €18,310,882 of the direct and indirect medical costs due to meningococcal and pneumococcal infections in the Netherlands. Base case cost-effectiveness (vaccine price €40) is €17,951 per QALY. The model is most sensitive to changes in incidence, vaccine price, and duration of protective efficacy. CONCLUSIONS: The introduction of this vaccine for infants leadS to large reductions in morbidity and mortality, and is a potentially cost-effective preventive intervention.

**PIN 33**

COST-EFFECTIVENESS OF DIFFERENT TREATMENT STRATEGIES WITH INTRAPARTUM ANTIBIOTIC PROPHYLAXIS TO PREVENT EARLY-ONSET GROUP B STREPTOCOCCAL DISEASE

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OBJECTIVE: To estimate the costs and effects of different treatment strategies with intrapartum antibiotic prophylaxis to prevent early-onset group B streptococcal disease in the Netherlands. The treatment strategies include a risk-based strategy, a screening based strategy, a combined screening/risk based strategy, and the current Dutch guideline. METHODS: A decision analysis model was used to compare the costs and effects of different treatment strategies with no treatment for a hypothetical cohort of 200,000 neonates. Baseline estimates were derived from literature and a survey among parents of GBS children. The analysis was performed from a societal perspective, and costs and effects were discounted at a percentage of 3%. RESULTS: The introduction of a combined screening/risk-based strategy with universal screening in pregnancy providing intrapartum prophylaxis for women with a risk factor or for unscreened women with pre-term labor would prevent 362 of the 600 cases with early-onset GBS for €9200 per QALY gained. The risk-based strategy is also an efficient strategy preventing 379 cases of onset GBS and a cost-effectiveness ratio of €10,200 per QALY gained. The other strategies resulted in lower effects for higher costs. Introducing the PCR test does not lead to more favorable cost-effectiveness ratios. CONCLUSIONS: In the Dutch
system the combined screening/risk-based strategy and the risk-based strategy are efficient strategies with reasonable cost-effectiveness.

**PIN34**

**COST-EFFECTIVENESS OF TWO SCREENING STRATEGIES FOR CHLAMYDIA TRACHOMATIS INFECTIONS IN FRANCE**

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**OBJECTIVES:** To evaluate two screening programs for *Chlamydia Trachomatis* (CT) in France by measuring cost per case and cost per treated case. **METHODS:** We evaluated the cost-effectiveness ratios of two CT screening strategies using a decision tree model. Strategy A involved screening of asymptomatic women only with partner notification; Strategy B involved screening of both asymptomatic men and women with partner notification. The current strategy of no screening was not evaluated. Clinical pathways were validated by a panel of experts. Direct cost analysis was performed from the point of view of the French National Health Insurance System. **RESULTS:** Overall, 347 women, and their partners could be treated by strategy A, and 296 individuals and their partners by strategy B. The total cost of strategy B was lower than that of strategy A (€213,400 compared to €250,558). Costs per case and costs per treated case were comparable for the two strategies, €557 and €722 respectively. According to a sensitivity analysis, the key variables were: CT prevalence, male participation rate, and likelihood that a man should consult a doctor. **CONCLUSIONS:** This is the first model for CT screening built on French data and thus a useful tool for French health policy decision-makers as it provides estimates for budgetary impact analysis. Its limitations are the hypotheses on which it is based (averted outcomes, direct costs . . .). Besides comparing the cost-effectiveness of screening, our study highlighted the need to standardize clinical practice and develop a good communication program.

**PIN35**

**MENINGOCOCCAL C VACCINATION OF CHILDREN AGED LESS THAN 1 YEAR: INCLUSION OF HERD IMMUNITY LEADS TO LESS FAVORABLE COST-EFFECTIVENESS RATIOS**

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**OBJECTIVES:** To estimate the incremental cost-effectiveness ratio (ICER) of routine meningococcal serogroup C conjugate vaccination of children at 2, 3, and 4, or at 5 and 6 months instead of at 14 months in the Netherlands and to determine the impact of including herd-immunity. **METHODS:** The analysis was performed from a societal perspective and in accordance to the Dutch guidelines for pharmacoeconomic research, using a cohort model. Direct and indirect (friction cost method) costs were considered. Future costs and effects were discounted at 4% and 2000 was chosen as baseline year. A vaccine effectiveness of 90% (based on UK data) and a vaccine protection duration of 20 years (based on the experience with Haemophilus influenzae type b) were used. Also on the basis of UK data, we assumed that 70% of all unvaccinated persons aged 0–14 months are protected because of the herd-immunity effect caused by the recent meningococcal C conjugate vaccination of all persons aged 14 months to 18 years. **RESULTS:** For immunization of children at 2, 3, and 4 (5 + 6) months, the herd-immunity effect decreases the yearly number of additional life years gained from 51 (36) to 15 (11) but leads to a strong increase of the ICER from €149,000 (€105,000) per life year gained to €497,000 (€349,000) per life year gained. Even if only a herd-immunity effect of 50% is assumed, the ICER still increases to about €298,000 (€209,000) per life year gained. These results are sensitive to the protection duration and effectiveness of the vaccine and the meningococcal C incidence. **CONCLUSIONS:** The inclusion of herd-immunity decreases the rendered small health gain and thus leads to even less favorable cost-effectiveness ratios for vaccination of children aged less than one year. Hence, the current Dutch vaccination strategy of routine vaccinating children at 14 months should not be changed.

**PIN36**

**COST-EFFECTIVENESS OF RESPIRATORY SYNCYTIAL VIRUS (RSV) PROPHYLAXIS AMONG PRETERM INFANTS IN POLAND**

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Respiratory syncytial virus (RSV) is a leading cause of a lower respiratory tract infection in infants and is responsible for increased hospitalization, morbidity, and deaths amongst high-risk individuals including those who are born prematurely. As the treatment of RSV infections is limited the analysis was focused on prophylactic therapy with palivizumab, a humanized murine monoclonal antibody that provides passive immunity against RSV. **OBJECTIVES:** To evaluate costs and cost-effectiveness of RSV prophylaxis among infants born at less than 32 weeks gestation in Poland. **METHODS:** Decision tree analysis was used to compare cost-effectiveness of two strategies, palivizumab and no prophylaxis, among a hypothetical cohort of infants born <32 gestational age. Probabilities were derived from published trials. Costs encompassed: drug costs, costs of non-intensive and intensive pediatric hospital care and costs of asthma treatment up to age 7. The discount rate of costs was set at