A COST-EFFECTIVENESS ANALYSIS OF A YEARLY FIBROSCAN® LIVER FIBROSIS ASSESSMENT COMPARED WITH A PERIODIC LIVER BIOPSY IN HEPATITIS C VIRUS (HCV) INFECTED INDIVIDUALS IN A FRENCH SETTING

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OBJECTIVES: FIBROSCAN® is an ultrasound elastography based non-invasive liver fibrosis assessment device. This new technology is aimed to replace or diminish the number of invasive liver biopsy performed. The purpose of this study was to compare, in terms of life expectancy and lifetime costs, a 5-year periodic liver biopsy follow-up of HCV infected patients to an annual liver fibrosis assessment using FIBROSCAN® which is assumed to allow an earlier antiviral treatment initiation.

METHODS: A discrete event simulation was developed. The model simulates the lifetime follow-up of a cohort of 10,000 HCV newly infected individuals. The Health Insurance perspective was used and costs were discounted using a 3% rate. Direct medical costs were derived from French official sources. The model was populated with published clinical trial data and other published studies. RESULTS: Death rate from hepatic mortality was reduced by 0.68% (68 deaths prevented over the whole cohort) with FIBROSCAN®. The survival gain was 0.07 year/patient that is 10.3 years for the 68 avoided deaths. The average cost of the disease was of €11,545/patient with FIBROSCAN® compared with €12,510/patient in the case of biopsy. When biopsy was performed every 3 years, there were no survival gain but savings of 3,722€/patient. At every 10 years, FIBROSCAN® follow-up remained a cost-effective strategy allowing a 3.53% reduction of hepatic death (353 deaths prevented over the whole cohort) and a survival gain of 0.39 year/patient (p < 0.001). In this latter case, the cost per life year gained was 810€ which is largely below the ratios commonly cited in such analysis. CONCLUSION: FIBROSCAN® is a dominant strategy. Compared to a periodic hepatic fibrosis follow-up with liver biopsy, FIBROSCAN® helps reducing hepatic mortality, increasing patients’ life expectancy and diminishing the costs associated with managing patients chronically infected with HCV.

COST-EFFECTIVENESS OF DIFFERENT PERTUSSIS VACCINATION STRATEGIES FOR THE PROTECTION OF YOUNG INFANTS

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OBJECTIVES: Despite good vaccination coverage rates and good a-cellular pertussis vaccine efficacy the incidence is still relatively high in The Netherlands. Pertussis is most severe in infants too young for already having completed the primary immunization schedule. For protection of young infants (below one year of age) further strategies should be considered. It is known that household members are an important source of transmission for these infants. The objective of this study was to analyze cost-effectiveness of specific vaccination strategies in The Netherlands explicitly targeting pertussis in these young infants.

METHODS: Data were extracted from national registries on incidence, hospitalizations and neonatal intensive care. Additionally, literature and expert consultations were used to complete information on morbidity and accompanying direct costs for pertussis in infants. A static decision analysis model was constructed for estimating health outcomes and costs potentially associated with different vaccination strategies. The strategies investigated were cocooning (father and mother), pre- and post-pregnancy maternal immunization, all to protect the infant from transmission of pertussis in the household setting.

RESULTS: Relatively, the potential most effective strategy would be cocooning. However this would also be the most expensive. Compared to do-nothing, incremental cost-effectiveness of the three strategies varied from €15,000 to just over €100,000 per hospitalization averted in the base case. Results appeared to be robust in sensitivity analysis. Under plausible assumptions, pre-pregnancy maternal immunization could well be the most cost-effective strategy. We note that the overall impact on total numbers of infections among young infants obviously crucially depends on the vaccination coverage achieved. CONCLUSION: Cost-effectiveness analysis as presented here is crucial in the Dutch decision making concerning additional pertussis vaccination strategies to protect young infants against severe disease. Further research is needed to fully assess the effectiveness of these strategies, inclusive the application of dynamical models for the spread of pertussis.
peginterferon-alfa-2a (40 KD) to be a cost-effective therapy for the private health care system in Brazil.

**PIN12**

**COST-EFFECTIVENESS OF LINEZOLID VS. VANCOMYCIN IN COMPLICATED SKIN AND SOFT-TISSUE INFECTION DUE TO SUSPECTED METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS IN FRANCE**

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**OBJECTIVES:** Studies have shown similar clinical cure rates and shorter length of stay (LOS) for linezolid compared to vancomycin in patients with complicated skin and soft tissue infections (cSSTI) due to suspected or proven methicillin-resistant Staphylococcus aureus (MRSA). This study examined the clinical and economic consequences of using linezolid vs. vancomycin from the French health system perspective. **METHODS:** A decision-analytic model followed an average patient from initiation of empiric treatment until successful 1st-line treatment, death, or 2nd-line treatment failure. Efficacy data were derived from published clinical trials. Resource utilization patterns were collected through structured interviews with 4 French physicians experienced in treating cSSTI. Costs from official price and tariff lists were applied to antibiotic therapy, hospitalisation (by ward type), isolation, tests, adverse events, and post-discharge. Patients could be discharged to oral linezolid. The base case used therapy duration and LOS from the expert panel. Outcomes included total cost per patient, and cost per cure. **RESULTS:** Average total cost per episode was €730 mostly due to reduction in LOS (cSSTI). Costs per life-year gained (excluding future costs) and death avoided were €6829 and €12,727, respectively. One-way sensitivity analysis on selected parameters (50% variation above or below baseline) did not change the overall conclusions. **CONCLUSION:** Improved clinical outcomes, but increased cost per episode were calculated for linezolid-treated patients. The results suggest that linezolid can be considered a cost-effective alternative for treating patients with NP due to suspected MRSA in France.

**PIN13**

**COST-EFFECTIVENESS OF LINEZOLID VS. VANCOMYCIN IN THE TREATMENT OF NOSOCOMIAL PNEUMONIA SUSPECTED TO BE CAUSED BY METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS IN FRANCE**

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**OBJECTIVES:** Linezolid has shown efficacy in the treatment of mecillin-resistant Staphylococcus aureus (MRSA) infections, including nosocomial pneumonia (NP). In patients with MRSA-NP, survival and clinical cure rate was higher for patients treated with linezolid (80% and 59%, respectively) than those treated with vancomycin (63.5% and 35.5%, respectively). The objective of this study is to assess the economic impact of these clinical outcomes in the Spanish setting. **METHODS:** A retrospective decision-analytic model from the hospital perspective was applied to pooled data from 2 prospective, randomized, controlled-double-blind studies. The model described possible treatment outcomes for patients beginning empiric MRSA-NP treatment. Clinical and other parameters were obtained from published trials and from an expert panel, comprised of 5 Spanish experts experienced in treating NP. Resource use was estimated by the expert panel. Only direct costs (€2007) were considered. The model assumed 50% of suspected MRSA patients had proven MRSA. Model outputs included costs/patient, cost/death avoided, cost/life-year gained (LYG), and cost/cure. Sensitivity analyses were carried out to test the robustness of the model. **RESULTS:** The overall clinical cure rate was 11% greater for linezolid than for vancomycin (71% versus 60%). Average total treatment cost was €16,602 for linezolid versus €15,823 for vancomycin-treated patients; incremental cost €6829. Death rates were 21% (linezolid) versus 34% (vancomycin), with an average 1.9 LYG per linezolid patient in a 65-year-

**PIN14**

**COST-EFFECTIVENESS OF LINEZOLID VS. VANCOMYCIN IN THE TREATMENT OF NOSOCOMIAL PNEUMONIA SUSPECTED TO BE CAUSED BY METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS IN SPAIN**

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