COST-MINIMIZATION ANALYSIS OF DAPTOMYCIN FOR MRSA SKIN AND SOFT TISSUES INFECTIONS IN BRAZILIAN PRIVATE SECTOR

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OBJECTIVES: To analyze the cost-minimization of Daptomycin in comparison to Vancomycin and Linezolid for patients with Methicillin Resistant Staphylococcus Aureus (MRSA) skin and soft tissues infections in Brazilian private payer perspective.

METHODS: The alternatives were indirectly compared due to the absence of Head to Head studies. Resource consumption for MRSA treatment were collected from previous publication and divided into two categories: hospital care (including diagnostic tests) and pharmaceuticals. Total treatment cost was investigated for a base case where patients were treated in the best profile for each medicine effectiveness based on values extracted from randomized open or blind studies (Daptomycin: Length of stay (LOS) = 4 days with intravenous drug. Vancomycin: LOS = 7 days with intravenous drug. Linezolid: LOS = 4 days with intravenous drug and 11 days with oral drug). The costs data regarding medicines were collected from companies price list or price submission process and utilization costs from literature. Results were converted in US Dollars (R $ 1.7/USD 1.00). A one-way sensitivity analysis was performed. RESULTS: For base case the total treatment was US$1,646.89 for Daptomycin, US$1,843.84 for Vancomycin and US$3,290.46 for Linezolid. Pharmaceutical inpatient cost was US$129.93 higher for Daptomycin in comparison to Linezolid and US$868.31 higher when compared with generic-vancomycin; however this cost was offset by shorter LOS. Despite the unitary prices of the Vancomycin and Linezolid are lower than the price of Daptomycin, the total treatment costs with Linezolid and generic-vancomycin is higher than with Daptomycin. The sensitivity analysis on costs variables in an interval of +/-20%, was robust with the base case. CONCLUSIONS: The Daptomycin is a cost-saving alternative for MRSA skin and soft tissues infections compared to generic-vancomycin and linezolid in the perspective of Brazilian private payer.

COMPARISON OF GENERIC AND BRAND NAME ANTIBIOTIC USAGE IN TURKEY

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OBJECTIVES: Irrational antibiotic usage is still common in Turkey and antibiotics are still the most commonly used drug in Turkey. Our aim in this study was to evaluate the effects of generic drug usage in inpatient clinics in Turkey, compared to brand names. METHODS: Data was collected from one university hospital, internal medicine inpatient service for 1 month. A total of 62 patients were treated with an antibiotic. The antibiotic's name, dosage and the duration of use were recorded by the nurses. The price of the antibiotics were extracted from the Ministry of Health's official price list. We compared the cost of the bio-equivalent and the cheapest generic drugs with the original drugs. RESULTS: During the month, the cost of the antibiotics used at the internal medicine inpatient clinic was €1136, compared to the cheapest generics, which was €1013. In this clinic, €2.2 per patient more was paid for the brand name antibiotics each month. If the 1400–1600 patients being treated with antibiotic in this hospital per year are considered, an average of €3300/month or €39,600/year is being paid for brand name antibiotics. CONCLUSION: Considering antibiotics are the most common used medication in Turkey (17% of total drug usage), it can easily be understood how the use of Brand Name drugs rather than Generics would lead to a vast economic burden. This shows the importance of promoting the use of generic antibiotics and the need for cost-minimization analysis.

HEALTH ECONOMIC ASSESSMENT OF A PRE-PANDEMIC INFLUENZA VACCINE FOR GERMANY

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OBJECTIVES: To estimate the cost and mortality impact of stockpiling pre-pandemic influenza vaccine for Germany, from a societal perspective. METHODS: A static decision analytic model was developed to examine the balance between stockpiling costs and potential cost-savings on primary care, medication, hospitalization and productivity losses and to assess the number of prevented deaths. The applied time horizon was five years. In the base-case, the annual probability of a pandemic, the clinical attack rate and case fatality rate in patients not receiving any anti-viral medication were conservatively estimated at 3%, 30% and 1%, respectively. The vaccine efficacy was assumed to be 65%. The effect of anti-viral medication on costs and mortality was considered. Stockpiling costs included acquisition, storage, expected replacement and expected administration costs of the vaccine. Productivity costs were estimated using the human capital approach. All costs were expressed in €2008. Costs but not deaths were discounted at 5% per year. Extensive univariate and probabilistic sensitivity analyses were performed. RESULTS: Stockpiling of pre-pandemic influenza vaccine was predicted to cost €1.54 billion and avoid €7.48 billion direct and productivity costs thus rendering net savings of €5.94 billion, (95% CI: €3 million–€16.3 billion). In addition, 17,711 deaths could be avoided. The probability of stockpiling vaccine being cost-saving was estimated at 97.7%. The most influential model parameters were the annual risk of a pandemic, followed by the case fatality rate. These results are likely to be conservative as herd immunity and macroeconomic effects were not included. CONCLUSIONS: Stockpiling of pre-pandemic influenza vaccine can be considered a dominate strategy for Germany as it is predicted to lead to cost-savings and to avoid a considerable number of deaths.

Socio-economic impact of avian influenza in south-east Asia and neighbouring high risk countries

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OBJECTIVES: To review the socio-economic impact of avian influenza in South-East Asian nations and neighbouring high risk countries. METHODS: The information was retrieved from the websites of World Bank, United Nations, clinicaltrials.gov, Medline and relevant grey literature from 1995 to 2008. Only English language articles and those covering South East Asia and neighbouring nations were analysed. Number of cases of avian influenza diagnosed, deaths in humans and poultry and associated socioeconomic impact were the outcomes of interest. RESULTS: Of the 1973 citations, 134 met the inclusion criteria. As per World Organisation for Animal Health, 6435 outbreaks of avian influenza in poultry (470 from South East Asia) have been reported in 48 countries till June 2008. Fourteen countries