THE COST OF PREVENTING INFLUENZA PANDEMIA: MEXICAN ELDERLY POPULATION SCENARIO

Soria-Cedillo I, Baca-Muro VY, Alejandro P, García-Conteras F
Residencia de Qro de Agua, Pfizer, Research Consulting, Puebla, Mexico; Nautila Farmaceutica Mexico, Mexico City, Mexico City, Mexico; Instituto Mexicano de Seguro Social, Mexico D.F., Mexico

OBJECTIVES: To compare the budget impact in the main Public Health Institution in Mexico due to the use of MF59-adjuvanted vaccine (MF59), split vaccine (SPL) and a No Vaccination Program Alternative (NOVA) in Mexican elderly population. METHODS: A budget impact analysis considering a public health institution perspective was performed. The expenses of the Mexican Health Care System due to a vaccinative program, vaccine administration, medical visits, treatment of complications related to influenza, and influenza related complications, hospitalization and intensive care unit cost were simulated with MF59 or SPL versus NOVA in elderly population affected by an influenza pandemic. A case scenario of high incidence influenza (5% of population) with three sub-scenarios was designed: 20%, 30%, and 50% of patients developing complications related to influenza. A systematic literature review was designed in order to include the most recent information about vaccines effectiveness measured as the ability of provide seroprotection against Influenza A/H1N1 strain and pandemic historical influenza incidences recommended by World Health Organization. Use of resources and cost matrices were designed with the most recent data of main Public Health Institution in Mexico, which attends about fifty percent of the total population in Mexico. RESULTS: The cost of treatment of influenza and complications related to influenza were estimated at US$38.84 and US$55,052 respectively. Simulating prevention of influenza pandemic affecting 5% of Mexican elderly population results in less expenses for Public Health Institutions when MF59 is used in vaccination program compared to SPL and NOVA without varying the proportion of patients getting complications related to influenza (20%): MF59-US$93,684,419; SPL-US$84,922,566; NOVA-US$62,274,400; 30%: MF59-US$93,684,419; SPL-US$84,922,566; NOVA-US$62,274,400; 50%: MF59-US$93,684,419; SPL-US$84,922,566; NOVA-US$62,274,400. Finally, the budget impact model was validated using a hypothetical cohort of 100 patients with IC episode. The expenses of the Mexican Health Care System due to the use of MF59-adjuvanted vaccine as a preventive alternative in an influenza Pandemic affecting elderly population in Mexico, represents important savings for Mexican Public Health Institutions compared to SPL and NOVA.

A BUDGET IMPACT MODEL TO ESTIMATE THE ECONOMIC IMPACT OF ITRACONAZOLE IN PROPHYLAXIS OF INVASIVE FUNGAL INFECTIONS IN PATIENTS WITH NEUTROPENIA IN SPAIN

Pinedo J, Restoy G
University of Barcelona, Barcelona, Spain; BCN Health Economics & Outcomes Research, SL, Barcelona, Spain

OBJECTIVES: A budget impact model (BIM) was developed to estimate the economic impact of itraconazole in prophylaxis of invasive fungal infections (IFIs) in patients with neutropenia in Spain. METHODS: A BIM was developed using published data for disease prevalence, population growth, pharmaceutical ex-factory prices, health care resource consumption and market shares forecasting for Spain. This study was developed under the perspective of the health care system and time horizon considered was 5 years with an annual discount rate of 3%. According to a panel of clinical experts, drugs considered in this study were all different “azoles” currently used in prophylaxis in Spain regardless whether they have been authorized for this purpose or not. These are the following ones: itraconazole, posaconazole, fluconazole and voriconazole. A model estimated the cost of this disease for the Spanish health care system with and without the partial replacement (from 5% to 15%) of posaconazole by itraconazole. All costs were referred to year 2009. RESULTS: According to official statistic, target population with hematologic cancers in prophylaxis of IFI in Spain would be around 75,000 patients in the first year, arriving at 75,000 in the 5th year. Direct medical costs for the next 5 years were estimated at €142 million before the replacement of posaconazole by itraconazole. Costs were estimated at €142 million whether this replacement would take place. CONCLUSIONS: The replacement of posaconazole by itraconazole in a very low percentage (from 5% to 15%) would replace a savings of €80,000 for the Spanish health care system in the next 5 years.

BUDGET IMPACT ANALYSIS OF NEW ANTRIRETROVIRAL MEDICINES FOR TREATMENT OF HIV PATIENTS IN BULGARIA

Danovska PG, Stefanova MT, Petrova GI
Medical University Sofia, Faculty of Pharmacy, Sofia, Bulgaria

OBJECTIVES: To analyze the budget impact of two newly registered for Bulgaria antiretroviral medicines tenofovir and emtricitabine for treatment of HIV infection. The point of view is that of health care system and time horizon is one year. METHODS: BIM budget impact model was created for antiretroviral medicinal therapies for first and second line treatment. Two scenarios were analyzed: high active antiretroviral therapy (HAART) including 12 medicines combinations for first line and 7 combinations for second line therapy. Health care resources included in the model are medicines, physician consultation first and 11 follow up attendances, 12 clinical, 3 virology and 6 immunology tests. In the model was varied the resource use and costs as apply to the population of interest. The model was validated using a hypothetic cohort of 100 HIV positive patients and near 230 of them are on highly active antiretroviral therapy (HAART) first or second line depending on their virology status. Preliminary results from the budget impact model show that in the first scenario (first line therapy) the combination tenofovir—emtricitabine—efavirenz is cost saving to the health care system compared to three of the most effective HAART regimens: AZT/3TC—LPV/r, 3TC/ARC—SQV and TDF—ETC—EFV and saves 141 981,46 Euro, 83461,33 Euro and 42445,99 respectively for one year. The second scenario second line therapy is indicated only for certain patients according to their virology status. In this scenario the regimen TDF—ETC—EFV is cost saving to the health care system in comparison with TDF—ETC—EFV and saves 2443,99. CONCLUSIONS: TDF—ETC—EFV is cost saving for the health care system comparing to three of the most effective regimens in Bulgaria. The combination is much appropriate as first line HAART.

BUDGET IMPACT OF HIV POST-EXPOSURE PROPHYLAXIS: AN EXAMPLE OF HOSPITAL POINT OF VIEW AFTER NEW RECOMMENDATIONS IN FRANCE

Bernard M, Avoin D, Massias L, Arnaud F
Institut Curie, Paris, France

OBJECTIVES: To develop a Budget Impact Model (BIM) to estimate the financial consequences of the use of levoloxacin for the treatment of community-acquired pneumonia (CAP) in Italian Hospitals to support health decision makers. METHODS: We developed a BIM for levoloxacin that compares current treatments for CAP (including levofloxacin) according to the features of their own scenario CONCLUSIONS: BIMs are primarily intended to inform health care decision makers, especially those who are responsible for national, regional, or local health care budgets. For this reason methodology and results were presented in an external engagement with payers to validate the model in a real scenario.