Abstract

Background: Influenza is an acute respiratory infection, that imposes a substantial burden of disease in annual epidemics and occasional pandemics. Vaccination is considered as the main weapon against influenza.

Objective: To assess the cost-effectiveness of influenza vaccination in Austria for healthy adults aged 16 to 65 years and for elderly people aged 65 or more years, from the perspective of the healthcare payer.

Methods: Data on vaccine effectiveness were extracted from published meta-analyses. Effectiveness is measured in cases of influenza-like illness avoided and avoided cases of hospitalization. Cost data were obtained from Austrian sources, mainly from health insurance funds. A decision tree was constructed to analyse and compare the costs and effects of the two strategies vaccination and non-vaccination.

Results: In the base case, influenza immunization of healthy adults results in net costs for the healthcare payer of EUR 404,94 per avoided case of influenza-like illness and EUR 25.365,30 per avoided hospitalization. Influenza immunization of the elderly turns out to be cost saving. In the base case, the net cost savings for the healthcare payer were EUR 58,64 per vaccinated person. One-way sensitivity analyses indicated that the results were in general robust across a wide range of cost estimates, but sensitive to a variation of vaccine effectiveness and probabilities of illness and hospitalization.

Conclusions: Given the assumptions of this analysis, influenza vaccination of the elderly is cost saving for the healthcare payer. However it has to be considered, that vaccine effectiveness and attack rates of influenza are variable and difficult to assess, but have significant effect on the results of the analysis.

Keywords: influenza, vaccination, cost-effectiveness, economic evaluation