A Pharmacoeconomic Evaluation of Influenza Vaccination in the Elderly Population in Italy

Objective
- Influenza is one of the major causes of morbidity, hospitalizations and mortality, particularly in the elderly population.
- Influenza vaccination has proven effective in the reduction of influenza-like illness (ILI) cases, and therefore in reduction in influenza-related hospitalizations, drug consumption, primary care consultations and deaths.
- The innovative MF59® adjuvanted vaccine increases immune response especially in the elderly population at high risk for influenza-related complications, and demonstrated an overall good safety profile.
- The aim of this study is to assess the relative economic impact in Italy of three different prophylactic strategies:
  1. No intervention
  2. Vaccination with a standard vaccine
  3. Vaccination with the MF59® vaccine

Methods
- A pharmacoeconomic simulation model has been developed to simulate the effect of the three different vaccination programs in the Italian elderly population, during one single influenza season.
- People of 65+ years resident in Italy are more than 11,900,000 [1], of which 82.6% at high risk for influenza-related complications due to underlying chronic diseases [2]. Current coverage rate for the influenza vaccination is 64.9% [3].
- Current Italian prices and tariffs (Tab. II).
- The perspective of Italian National Health Service was adopted; direct sanitary costs were considered, according to Italian prices and tariffs (Tab. II).
- To test the robustness of the model, a one-way sensitivity analysis was performed on main parameters.

Results
- Absence of vaccination could lead to more than 2 million ILI cases, 300,000 hospitalizations and 30,000 deaths.
- The vaccination program would lead to an estimated 1.5 million ILI cases with a standard vaccine, and to 1.3 million cases with the MF59® adjuvanted vaccine.
- Number of hospitalizations is reduced to 270,000 with the traditional vaccine and to 230,000 with the MF59®, and number of deaths is reduced respectively to 18,000 and 16,000.

Conclusions
- Vaccination with the MF59® adjuvanted vaccine is more effective and cost saving when compared with the standard vaccination or no vaccination, thus representing the optimal strategy for the elderly population.
- The standard vaccine, despite a slight cost increase, proved to be cost effective compared to the null option.

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References
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