Cost-effectiveness of influenza vaccination for elderly people living in the community
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Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

CRD summary
This study evaluated the cost-effectiveness of influenza vaccination for those aged over 65 years in Hong Kong. The authors concluded that vaccination against influenza was cost-effective from a societal perspective and most of the cost savings were from reduced mortality. The study was adequately reported and the methods were sound. The authors’ conclusions are consistent with the evidence.

Type of economic evaluation
Cost-benefit analysis

Study objective
The aim was to evaluate the cost-effectiveness of influenza vaccination for those aged over 65 years in Hong Kong.

Interventions
Comprehensive and opportunistic (offered to people visiting a doctor for another reason) influenza vaccination programmes were compared with no vaccination.

Location/setting
Hong Kong/primary care.

Methods
Analytical approach:
The clinical data, from published evidence and from observational datasets, were used to determine the number of lives saved through vaccination. The analysis had a one year horizon and the authors presented three perspectives, with the primary one being societal.

Effectiveness data:
These data were from a published meta-analysis of the effectiveness of influenza vaccination (Jefferson, et al. 2005, see ‘Other Publications of Related Interest’ below for bibliographic details) and a local survey. The key clinical parameters were the cost, the uptake, and the effectiveness of vaccination.

Monetary benefit and utility valuations:
A monetary value of life was applied for each life saved.

Measure of benefit:
The measure of benefit was the net monetary benefit.

Cost data:
The analysis included the direct medical costs of vaccination drugs and administration, and of treating influenza associated morbidity, and the value of lives lost due to influenza. These costs were from published sources. The price year was 2000 and all prices were in Hong Kong dollars (HKD). The time horizon was one year.

Analysis of uncertainty:
A probabilistic sensitivity analysis was performed to identify the cost at which influenza vaccination became cost-saving.
Results
The benefit of a comprehensive influenza vaccination programme from the societal perspective was estimated to be HKD 3,824 million (HKD 6,207 per person vaccinated) and for the opportunistic programme it was HKD 3,041 (HKD 6,646 per person vaccinated).

The incremental net benefit of the vaccination programme was negative from the personal and the government perspectives, but positive from the societal perspective, which means that it was cost-effective for society. The value of a life saved, for someone aged over 65 years, would have to be at least HKD 68,047 for vaccination to be cost-effective.

Authors' conclusions
The authors concluded that vaccinating people against influenza was cost-effective from a societal perspective and that most of the cost savings were from reduced mortality.

CRD commentary
Interventions:
It was appropriate to compare the vaccination strategy with no vaccination as this was the usual care. These strategies are likely to be relevant in other settings.

Effectiveness/benefits:
The data were appropriate to the study setting and their sources appear to have been robust. They were reported in a table, with references for the sources. The source for the value of life was not stated. The cost-benefit approach appears to have been appropriate, but there might have been costs and benefits, relevant to the strategy, that could not be quantified in money.

Costs:
The perspective was clearly defined and it appears that the key costs were included. A full breakdown of the cost items was not given, which limits the ability to replicate the results for other settings. Other important details, such as the price year, were provided.

Analysis and results:
The cost-benefit approach was appropriate for determining the net benefit of the vaccination strategy. The time horizon was appropriate because the influenza vaccination was an annual programme. The probabilistic sensitivity analysis was useful for establishing the threshold at which the vaccination strategy would no longer be cost-effective. The results were well reported, but the authors did not discuss the strengths and limits of their approach.

Concluding remarks:
The analysis was satisfactory in the selection of the clinical and economic data and comprehensive in the reporting of the results. The authors’ conclusions appear to be consistent with these results.

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