



Title Vaccination for Influenza in Elderly
Agency DIHTA, Danish Institute for Health Technology Assessment (now DACEHTA)
 Danish Centre for Evaluation and HTA (DACEHTA), National Board of Health,
 P.O. Box 1881, Islands Brygge 67, DK-2300 Copenhagen S, Denmark
 Tel: +45 72 22 74 48 Fax: +45 72 22 74 07
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This report is based on a structured literature review and estimates of Danish conditions and policies on influenza vaccination in people older than 65 years.

Four different organizational regimes are compared:

- A. Non-structured activities.
- B. Personal invitations from the GP to the elderly. Patient fee charged for vaccination.
- C. Personal invitation from a public agency. Vaccination by a nurse free of charge.
- D. Personal invitation for vaccination administered by family doctor, free of charge.

The analysis is based on the assumption that 17 vaccinations are needed to prevent one case of influenza, and that the life expectancy of those who died is equal to the life expectancy of the remaining population.

The clinical effect of a vaccination offer ensuring that 70% of the elderly over 65 are vaccinated is compared with the hypothetical situation that no elderly people are vaccinated. In Denmark (total population approx 5 million), this would prevent 33 000 reported cases of influenza, reduce the number of in-bed days by 4300, reduce the number of deaths by 196, and save 1540 life years. Surveys, however uncertain, indicate that regimen A results in 40% vaccinated, regimen B in 50%, regimen C in 66%, and regimen D in 70% vaccinated.

Based on these figures, and on the actual costs for the regimens, regimen D would save the most life years and regimen A would save the least. Regimen C would be the least expensive, and regimen D would be the most expensive in socioeconomic costs. Regimen C would be the most cost-effective and regimen A would be the least cost-effective. Thus, in this study, the structured regimes were superior to the non-structured ones.

Cost-effectiveness analysis (CEA) for each of the four regimens, assuming that no one is vaccinated

Organizational regimen	Years of life gained	Socio-economic costs (DKK million)	CEA ratio (DKK 1000/year of life)
A – Non-structured activities	881	68.4	78
B – General-practice vaccination; user free	1 101	73.6	67
C – The Copenhagen regimen	1 453	34.7	24
D1 – General-practice vaccination; free of charge	1 541	92.0	60
D2 – General-practice vaccination; free of charge	1 541	69.3	45

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Written by Assoc. Prof. Jan Adolfsson, SBU, Sweden