

Use of influenza vaccine in The Netherlands

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Influenza vaccination is safe and effective in reducing mortality and morbidity due to influenza, but compliance with the guidelines for use of the vaccine seems to be low in both the United Kingdom and The Netherlands.^{1,2} The aims of this study were to establish the degree to which patients who should be immunised according to official Dutch guidelines are actually immunised and to understand why some patients receive the vaccine and others do not.³

Patients, methods, and results

Patients belonged to one of four groups: those with chronic heart disease (with a valve lesion or a history of myocardial infarction), chronic obstructive pulmonary disease, diabetes mellitus, or chronic renal insufficiency for which dialysis was required. According to the official Dutch guidelines immunisation is mandatory for these groups, regardless of age. The records of all patients who were to visit an outpatient department in this hospital and in two large general hospitals elsewhere in The Netherlands in a given week were reviewed. All 646 patients who should have been immunised according to the guidelines were asked to answer a questionnaire. Those who accepted were subsequently interviewed by telephone.

Sixteen patients refused to participate and 35 were not reached by telephone. Answers were obtained from the remaining 595 patients (92%), 346 men and 249 women with an average age of 57.3 years (range 18 to 90 years). In the year preceding the interview 333 patients (56%) had received the vaccine (table): 89/162 (55%) with chronic heart disease, 91/169 (54%) with chronic obstructive lung disease, 78/152 (51%) with diabetes mellitus, and 75/112 (67%) undergoing dialysis. The highest rate of immunisation (90%) was found for a dialysis department which provided all patients with information about immunisation together with a prescription to obtain vaccine every year. For patients aged 65 years and older the immunisation rate was 66% compared with 50% for patients younger than 65 ($\chi^2=12.69$; $p<0.01$).

Of the 333 immunised patients, 300 (91%) remembered having received advice to be immunised from their physician at least once; of 262 patients who were not immunised, only 50 (19%) had received such

advice. General practitioners had immunised 279 patients, specialists at the outpatient clinics 46, and other doctors the remainder. In total, 170 (61%) of those immunised by general practitioners and 43 (93%) immunised by specialists received reminders.

In 103 of the 262 non-immunised patients lack of advice was the reason for non-immunisation, in 65 the patients thought that immunisation was unnecessary, and 24 had been advised by their physician to avoid immunisation; fear of side effects kept 47 patients from accepting the vaccine, and 23 had other reasons for not having been immunised.

Immunisation status of patients and advice to be immunised, according to questionnaire responses

| | Immunised | Non-immunised | Total |
|---------------------------|-----------|---------------|-------|
| Advice to be immunised | 300 | 50 | 350 |
| No advice to be immunised | 33 | 212 | 245 |
| Total | 333 | 262 | 595 |

Comment

Slightly more than half of the interviewed patients had been immunised, which is more than commonly seen without a special vaccination programme.^{1,2} This relatively high figure may be an overestimation, due to our selection of patients from hospitals. Nevertheless, 44% of patients had not been immunised.

We conclude that whether someone receives the vaccine depends largely on whether this person is advised and reminded to do so. This suggests that informing patients personally of the need for immunisation and reminding patients annually could increase use of the vaccine.⁴ To achieve this physicians must be convinced that immunisation of high risk groups is necessary and that patients have to be motivated to undergo it, despite the possibility of side effects.⁵

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Winter pressure on hospital medical beds

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In winter it becomes difficult to admit patients who require emergency medical treatment because of shortage of beds. We investigated whether this is due to more emergencies occurring or patients who are admitted having a longer stay, or both.

Patients, methods, and results

Scottish Morbidity Records (SMR 1) from Grampian region (plus Orkney and the Shetland Islands) are

processed in Aberdeen by using a computerised system with record linkage. The population was about 500 000 during the study, and most of the hospitals are in Aberdeen. We examined the 66 819 admissions to general medical beds over the five years from 1984 to 1988. The presence or absence of significant seasonal variation was determined by cosinor analysis.^{1,2} Where appropriate, numbers were corrected for length of month to 31 days.

Monthly admissions, mean length of stay, and bed occupancy were established for all patients and for patients with cardiovascular or respiratory disease (40.2%)—that is, ischaemic (14.1%), cerebrovascular (5.1%), other circulatory (12.0%), and respiratory (9.1%) diseases—and for patients with all other diseases (59.8%). Patients were also grouped by age (0-54, 55-64, 65-74, >75). However long the admission all the days were allocated to the month of admission for the calculation of length of stay.