An audit of influenza vaccination rates

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BACKGROUND
Influenza immunisation confers benefits for the elderly. We attempted to increase the uptake of influenza vaccination in those aged 65 years and over in one general practice in Queensland.

METHOD
We used four strategies: a computer search for the target population; telephone recruitment and booking by our receptionist; removal of cost by bulk billing; and using nurse led immunisation. We measured 2004 and 2005 influenza immunisation rates to determine a before and after difference, and sent a questionnaire to patients refusing vaccination.

RESULTS
We increased the influenza vaccination rate among 580 patients aged 65 years and over from 77% in 2004 to 83% in 2005 (national rate 79% in 2004). The refusal rate was 10%.

DISCUSSION
Influenza immunisation rates improved using a targeted approach. Nurse immunisers seemed to be efficient and offered a saving of doctors' time.

For elderly people, influenza vaccination confers significant benefits.[1] Routine invitation by general practitioners to patients aged 65 years and over for free influenza vaccination is recommended.[2] But male gender, low income, lack of GP recommendation, negative perceptions about the vaccine,[3] and shortage of time[4] are barriers to vaccination. Effective immunisation strategies should target these barriers.[3] They include using at risk registers, paper reminders, practice assistants to support preventive activities, and computer prompts.[5–7] Even so, refusal rates of 9% have been reported.[8]

These barriers suggested four strategies to improve influenza vaccination rates; we aimed for 90%:

- electronic record search for the target age group
- telephone recruitment by the receptionist
- removal of any cost barrier by bulk billing, and
- nurse led immunisation.

Methods

We included patients aged 65 years and over in our practice in Bundaberg (Queensland). Patients were included if they had: attended within the previous 12 months; had not transferred to another practice; and had a Bundaberg address.

Free influenza vaccines were ordered from VIVAS (Queensland) for a target 6 weeks. We searched Medical Director 2 electronic health records to obtain a list of eligible patients (organised into six secondary lists) to be contacted each week starting in February 2005. The receptionist then telephoned patients informing each they were due for their influenza vaccination and offered an appointment. Patients refusing vaccination were noted. Uncontactable patients were telephoned again at the end of the period.

Two nurse immunisers ran clinics in which they vaccinated, updated the electronic health record, checked off the influenza target master list, and electronically bulk billed the patient (using Medicare items 10991 and 10993).

Unfortunately, in March 2005 an influenza vaccine supplier failure created a shortfall throughout Australia, so we had to extend clinics to the end of May and reduce the number of clinics per week accordingly. We supplemented this opportunistically: eligible patients presenting for other reasons during this period were identified by computer prompt and referred to the nurse immuniser after the consultation, or if unavailable, the GP gave the vaccine.

Influenza immunisation rates for 2004 (1 February to 1 August) and 2005 (1 February to 31 May) for the

Table 1. Self reported reasons for refusing influenza vaccination (n=38)

Reason for refusal	n (%)
Previous reaction or allergy to flu vaccine	11 (30)
Lack of information	1 (3)
Lack of relevance	11 (30)
Lack of net benefit (usually fear of side effects)	12 (31)
Lack of opportunity	2 (6)

targeted group were compared, testing for significant differences using the Chi-square test. In June 2005 we sent a questionnaire to those who refused influenza vaccine asking for their reasons.

Results

Influenza vaccination was refused by 56 out of 580 (10%) patients at recruitment. We failed to contact 7%, leaving 83% vaccinated. The previous 2004 influenza immunisation rate was 442 (77%) of 574 patients ($p<0.0005$). Of the 482 vaccinations, 44 were given by doctors (nursing home visits or no nurse on duty) and 438 by nurses. Of the nurse vaccinations, 327 were in clinics and 111 opportunistically after a doctor consultation. Pneumococcal vaccination rate was 91% (528 out of 580). Pneumococcal vaccine was only promoted opportunistically and no attempt was made to measure any change during the campaign. The questionnaire was sent to all 56 refusers; 38 responded (66%) (*Table 1*).

Discussion

These results have limitations: the before-after design is vulnerable to other temporal confounders (including immunising over a longer period); there may have been special factors (environmental or personal) at our practice; and the numbers were small. Nevertheless we may have significantly increased our influenza vaccination rate in the target group in autumn 2005 with four strategies.

If it takes 5 minutes to recruit, consent, obtain, give and record a vaccination, our results suggest a time saving for the doctors of about 37 hours (for just over two doctors) for the season.

The 10% influenza refusal rate is consistent with other studies.[7] Perhaps the need for influenza vaccination every year is a difficulty. We welcomed the reduced doctor workload for influenza vaccination. If national health priorities put influenza vaccination high, then a small incentive, and a declared national benchmark to aim for, might be effective.

Implications for general practice

- Nurse led immunisation offers a significant time saving for GPs.
- Barriers to immunisation in general practice can be removed effectively.
- Removing these barriers led to a modest increase in our immunisation rate the following year.

Conflict of interest: none declared.

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