Original Research Paper

Sick of the flu? A study of the influenza vaccine: prevalence and patient awareness in general practice

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This article is an edited presentation of a Wellington School of Medicine Trainee Intern GP Group Project.

Key points

- A questionnaire was given to general practice attendees to quantify patient awareness of the influenza vaccine
- There were 284 respondents; two-thirds of which were female
- Increased promotion appears to have raised public awareness about the vaccine
- Most repondents cited the media and health professionals as their main source of information about the vaccine
- Vaccine uptake was highest in the over 65 age group

INTRODUCTION

Project aims

1. To quantify the level of awareness of the influenza vaccine within general practice populations.
2. To identify how participants obtained information about the influenza vaccine.
3. To ascertain the prevalence of influenza immunisation in the population studied.
4. To identify the demographic characteristics of participants who chose to be immunised.

Expectations

We expected there to be little difference in vaccination rates between the sexes but a marked difference in rates by age due to the availability of free vaccines to those over age 65. As a result of the increased advertising we expected the media to have a significant role in increasing public awareness.

BACKGROUND

Influenza is a serious disease. Its importance has been emphasised by the recent epidemic in Europe, which affected millions of people. This year's northern hemisphere influenza virus, known as "Sydney" flu, has been a particularly virulent strain resulting in many deaths from complications such as pneumonia and meningitis.

The first convincingly recorded epidemic in Europe was in 1173 and the first pandemic in 1580. The three pandemics in the past century (1918, 1957, 1968) were associated with high rates of morbidity, social disruption and high economic costs.

Inactivated vaccines were first developed over 50 years ago. Many studies have confirmed their safety and efficacy in preventing influenza and their complications. A meta-analysis of 20 cohort studies estimated a 53 per cent reduction in pneumonia, 50 per cent reduction in hospitalisation and 68 per cent reduction in mortality related to influenza.[1] Large studies in the US and Canada have shown that vaccination programmes in the elderly and at- risk patients are cost-effective.[2]

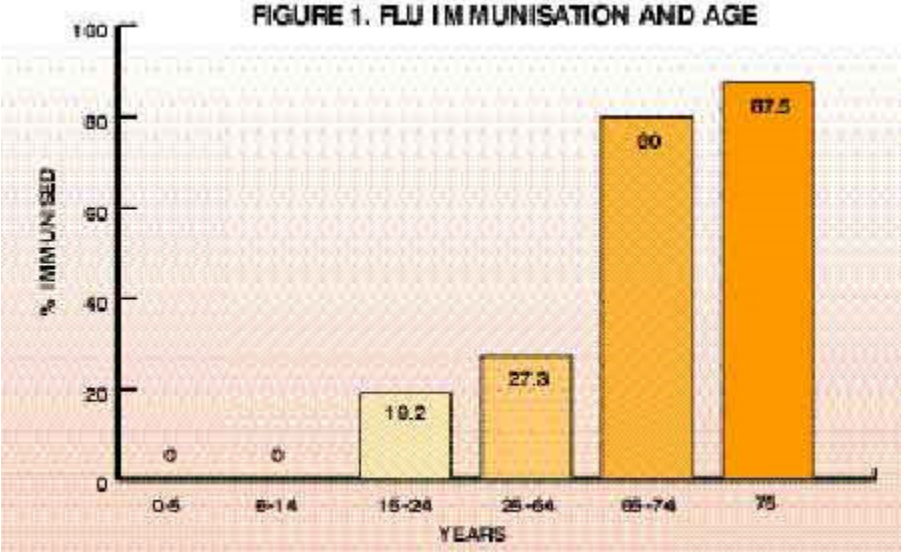
The seroconversion rates for the 1997-1998 vaccine were greater than 70 per cent for adults aged 18-60 years and greater than 60 per cent for those over 60 years.

The influenza virus hits during winter. Each year a slightly new strain appears and authorities attempt to anticipate this so a vaccine can be developed. Yearly updated influenza vaccines are now readily available. However, in most countries less than half of all high-risk patients are vaccinated each year.

In New Zealand last year, 58 per cent of people aged 65 years and over took advantage of free vaccination _ 17 per cent short of the national target. The HFA estimated that only 15 per cent of other eligible people were vaccinated.

Coverage rates varied regionally with higher rates in Hawkes Bay and South Island centres.[3] Increasing the overall level of immunisation provides the benefit of "herd immunity", making an influenza epidemic less likely.

FIGURE 1. FLU IMMUNISATION AND AGE



A National Influenza Immunisation Strategy Group (NIISG) was set up this year to increase public awareness of influenza. A more aggressive promotion campaign was launched and the free vaccination scheme extended to include all those with chronic medical conditions.

General practice remains the greatest influence on people accepting influenza vaccination. Australian research found people would have the vaccination if:

• their doctor suggested it (62 per cent)

• they knew about the effectiveness of the shots (42 per cent)

• they received a reminder letter (34 per cent).

METHOD

We decided a patient questionnaire was the most appropriate means of collecting raw data. It had to be user-friendly as well as providing essential information for analysis.

The questionnaire comprised five questions which looked at gender; age; vaccination awareness and sources of awareness; number of vaccination recipients and reasons for not having it; and awareness of eligibility for free vaccination.

Each student made 50 copies of the questionnaire and the method of sampling was discussed with the individual practice receptionists, who issued the forms randomly.

The data from 300 completed forms were then entered into Microsoft Excel, aiding further analysis of our findings.

RESULTS and DISCUSSION

The total number of patients who responded to the questionnaire was 284. The age groups zero to five years and six to 14 years were significantly under-represented, suggesting that parents filled in the questionnaire for themselves rather than their child. In the category 15-24 years there were 26 responders; 25-64 years _ 184 responders, 65-74 years _ 45 responders; and 75+ years _ 24 responders. Our sample consisted of two-thirds female and one-third male responders.

The first question allowed us to compare the levels of vaccination in males and females. The level of vaccination was 6 per cent higher in males (males 43 per cent, females 37 per cent). The sample size for females was almost twice that of males, which may make the female level more accurate.

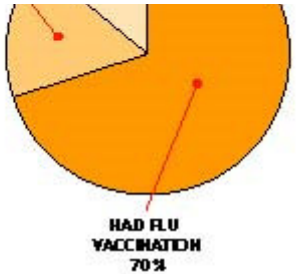
Age distribution

Figure 1 illustrates the immunisation trends across age groups. As expected, the percentage of respondents who received the vaccination was highest in the age brackets entitled to receive free vaccination. The level of immunisation in the over 65 group was in excess of 80 per cent; above the levels aimed for by NIISG (75 per cent), and significantly higher than the recorded national averages (58 per cent in 1999, 55 per cent in 1998 for the over 65 age group). However, our sample consisted solely of patients presenting to their GP, and may not be representative of the total population.

The level was 0 per cent in the two youngest age brackets, grossly affected by the very small sample size for these age groups. Indeed there was an increase from 27 per cent uptake in the 25-64 age group to 83 per cent uptake in the 65-74 age group. The perception that influenza is only a serious illness in the old and the chronically ill may also contribute to these figures.

Uptake of vaccine

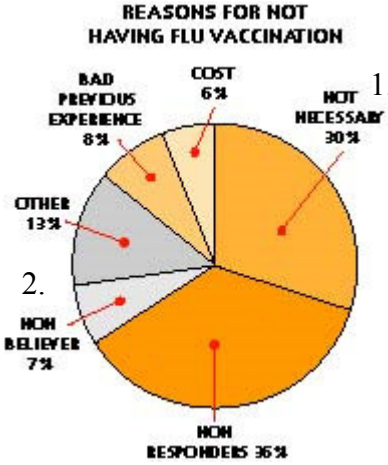
From our data we were able to compare uptake of the vaccine in the different regions surveyed (Wanganui, Raumati Beach, Upper Hutt,



Wainuiomata, Christchurch and Ranfurly). This included those who had already had the vaccine and those who intended to have the vaccine. Uptake ranged from 45-60 per cent, the lowest being in Wainuiomata. However, it was reassuring that there was no great variability between regions.

We also looked at the uptake among those who were eligible for free flu vaccination. Among those who were aware they were eligible, 70 per cent had already had it, 14 per cent intended to get it, and 16 per cent did not intend to get the vaccination at all (Fig 2). ***Fig 2***

Reasons for not having the vaccination are shown in Fig 3.



The four main reasons given were as follows:

1. The most common reason was perceived lack of need for the vaccination (30 per cent). This has been identified by NIISG, which has pushed the seriousness of the illness (including a move to stop referring to influenza as the flu).

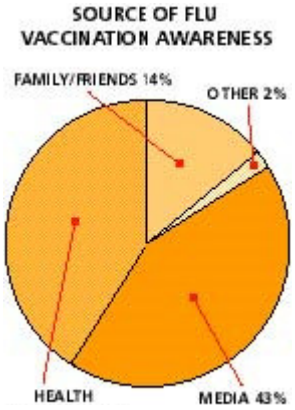
2. Cost was identified as a reason for 6 per cent. Many employers, who identify the importance to reduce absenteeism among workers, have offered the vaccination free to employees to try to combat this barrier.

3. Some patients do not believe in vaccines (7 per cent), an area that could be addressed by GPs.

4. Eight per cent of responders identified previous bad experience following prior vaccinations (either personal or friends/family).

Source of awareness

The impact of advertising on knowledge of the influenza vaccine was also studied. The vast majority (96 per cent) of the people who responded had heard of the influenza vaccine. The single biggest source of knowledge was the media, at 43 per cent. Health professionals followed closely at
41 per cent and family and friends at 14 per cent. NIISG's strategy to increase advertising this year by both the media and health professionals appears to have had a marked impact.



CONCLUSIONS

Our initial expectations were largely realised, with some additional surprises.

We received 284 replies to our survey. Two-thirds were female and one-third male. Vaccine uptake was greater in male than female respondents (43 *v* 37 per cent). There was marked variability in age, with the largest percentage of vaccine uptake in the age group 65 and older (83 per cent) compared to national figures of 58 per cent in 1999. We believe much of the discrepancy arises from the

difference in sample methods. The national survey provided a prevalence for people over 65 in the whole population, whereas our survey only sampled those over 65 who attended their GP.

We conclude there is a very high level of public awareness of the existence of the vaccine, with an overall awareness of 96 per cent. Respondents indicated the media (43 per cent) and information from health professionals (41 per cent) as comprising their leading sources of information on the vaccine. The media currently plays an important role in influencing consumer behaviour.

The location of the practice resulted in less variation than expected. Uptake of the vaccine was between 45 and 60 per cent.

We hope this research project will be of benefit to those involved in primary health care.

Acknowledgements: We would like to acknowledge the help we had from the GPs at the medical centres and their staff. Thank you to: Dr Wickremesekra, Wainuiomata Health Centre; Dr Sim, Upper Hutt Medical Centre; Dr Brown, Raumati Road Surgery; Dr Mannis, Redwood Clinic; Dr Cresswell, Te Waipuna Health Centre; and Dr Smith at the Ranfurly Medical Centre**.**

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