Successful provision of influenza vaccine from a community pharmacy in Aberdeen

By Caroline Hind, Gordon Peterkin, George Downie, Charles Michie and Eunice Chisholm

Abstract

Aim

To investigate a new model for administering influenza vaccine through community pharmacy

Design

Questionnaire

Subjects and setting

Under 65-year-old, "at-risk" patients from a community pharmacy in Aberdeen over a 4-week period. Patients' GPs.

Results

56 patients were vaccinated; 55 thought that the injection was administered as well as in the past; 10 patients would not have had the influenza vaccine if not offered by the pharmacist; 55 would use the pharmacy to receive other vaccinations if offered in future. Of the 24 of 32 practices that returned questionnaires, 67% would support the scheme running again and 63% would support the extension to other pharmacies; 29% were happy for the service to be extended to over 65-year-old patients not in the "at-risk" groups; 42% would support community pharmacies providing other vaccination services.

Conclusions

The scheme has offered patient choice and a degree of flexibility not available from some general practices. Patients were positive about the scheme. Most GPs were supportive of the scheme.

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Every winter, influenza affects people of all ages.[1] For most, the illness is unpleasant but self-limiting, but for a number of at-risk groups, serious illness will cause personal distress and sometimes death, and puts pressure on health and other services. Immunisation is an effective way to prevent or ameliorate influenza. It reduces complications and hospital admissions due to infection by as much as 60 per cent and morbidity by 40 per cent.[2] Recent policies have targeted those groups who are most likely to suffer such complications or to die from the infection.[3]

Previous unpublished work has been carried out in Grampian, North-East Scotland, in 1992/93 to find out whether pharmacists could identify "at risk" patients who had not already been identified or immunised. The projects demonstrated that community pharmacists could identify patients either systematically through the patient medication records or opportunistically when patients bought over-the-counter medicines or presented prescriptions.

In the US and the Netherlands, there have been reports of pharmacists successfully administering vaccines for influenza, pneumococcal pneumonia and hepatitis B.[4–10] One postal survey[8] assessing vaccinations by community pharmacists concluded that patients were satisfied with the experience and cost. In one report, the pilot programme involved 75 pharmacists and included training, a protocol and remuneration.[4] In another US pilot, project pharmacists successfully administered flu vaccine[5] and there has been a successful pilot in the Netherlands.[6]

Another small study (unpublished) was undertaken in two community pharmacies in Aberdeen in December 2001 to assess the level of support for influenza immunisation in pharmacies that might be expected from patients. Given a choice of venue to receive the vaccine, 16 per cent indicated they would prefer to receive it in the pharmacy, 52 per cent in the GP surgery; 27 per cent had no preference and 5 per cent did not respond to this question.

This paper describes a new model for administering influenza vaccine through community pharmacies. Our aims were:

- To increase the uptake of influenza immunisation, targeting patients under 65 years of age in at-risk groups
- To provide an element of patient choice
- To develop and evaluate a new role for pharmacists

The study was carried out in the Grampian region in the North East of Scotland. It has a population of half a million people spread over 3,000 square miles of urban and rural communities. The City of Aberdeen constitutes the main urban area. Provision of influenza vaccine is free of charge under the NHS to those patients meeting the NHS criteria.

Method

All 37 community pharmacies in Aberdeen were contacted about administering influenza vaccine. Five of these pharmacies expressed an interest and were visited to determine their suitability for administration of vaccines, eg, provision of private areas, couch, recovery area. Provision within the community pharmacy for treatment of anaphylaxis also needed to be available, even although statistics indicate this is unlikely to occur.[11] From the five pharmacies, one was chosen from which to run the pilot project, although this was not the initial intention. Of the other pharmacies expressing an interest, three did not meet the premises requirements and the fourth decided not to participate. The pharmacy chosen was situated in the centre of Aberdeen, close to the main shopping area and also close to many centrally located businesses and offices. It had a private clinical room located next to the dispensary. It was decided, in order to increase GP acceptability, only to target patients who were in the under-65 at-risk groups since there was likely to be a clash of financial interest with GPs in providing vaccination for patients over 65 years.

To comply with the Medicines Act 1968, a patient group direction was prepared for the administration of influenza vaccine and for the use of adrenaline in cases of anaphylaxis. A PGD is defined by an amendment to UK medicines legislation and allows specifically designated health care professionals to supply or administer prescription-only medicines to predefined groups of patients. Each of the two community pharmacists who worked in the selected pharmacy signed up to work under the protocol and received training on vaccination technique, dosages, providing treatment in the event of anaphylaxis and record keeping. Grampian Primary Care NHS Trust's training department provided the training both in injecting technique and management of anaphylaxis. In taking this forward in the first year, a joint nurse/pharmacist approach was adopted. The nurses

were employed by the primary care NHS trust and were present to support the pharmacist and provide advice during the vaccination clinics. The injections were largely administered by the pharmacist.

Patients were recruited in two ways, by self-referral as a consequence of the publicity and promotional material and by active targeting of at-risk patients by the pharmacists in the pilot pharmacy by means of the patient's current prescription. Patients were allocated appointment times to be given their vaccine.

Before the vaccine was administered the pharmacists were required to determine that the patients were under 65 years of age and in one of the following at-risk categories: (i) chronic cardiac disease, respiratory disease, renal disease. (ii) diabetes mellitus, (iii) immune suppression due to disease or treatment, or (iv) were acting as a carer to an at-risk patient who was a relation.

Patients were given an information leaflet explaining the scheme and informed that details of their immunisation would be provided to their GP. Patients were required to complete a consent form and provide details of their risk group and current medication. Following vaccination the patients remained on the premises for at least 10–15 minutes. Advice was given on what to expect and what action to take for major and minor reactions. A patient information leaflet from the packaging was given to each patient.

Clinics were run over a four-week period in October and early November 2002. Eleven two-hour sessions were held on Monday and Wednesday lunchtimes and Saturday mornings. Following the vaccination session, information regarding the patients was sent to the patients' GP for updating of the patient medical record.

Main outcome measures Every patient vaccinated under this pilot scheme was asked to complete a patient acceptability questionnaire during their 10–15 minute wait following vaccination. Patients were asked about the conditions of the pharmacy and the quality of the service, as well as the reasons they had for choosing to be immunised by a pharmacist.

A different questionnaire was sent to each general practice whose patients had been vaccinated by the pharmacist. They were asked if they had received information concerning their patients who had been vaccinated and if they agreed that this was appropriate. They were also asked some general questions concerning their support for the scheme.

Both pharmacists in the study were given a structured interview following completion of the study to determine their views and gain feedback on the pilot.

Results

Fifty-six patients were vaccinated in the community pharmacy during the 11 two-hour sessions; all of them completed a patient questionnaire. However, not all the questions were answered in every questionnaire.

Of those patients vaccinated, 46 attended general practices within Aberdeen and 10 were from other general practices within Grampian but outside the city. Over half of the patients were in the 51–64 years group (53.6 per cent), 25 per cent (14) were aged 41–50 years, 12.5 per cent (seven) were aged 31–40 years and 8.9 per cent (five) were aged 16–30 years.

Of those patients who requested vaccination from the pharmacy, 14 patients over the age of 65 years were referred to their GP for vaccination. Sixteen patients had medical conditions not included in the at-risk criteria and so could not be included in the current project. One hundred and ninety-three telephone calls were received from members of the public who had no pre-existing medical conditions enquiring about influenza vaccination as a consequence of the publicity in the local press and radio.

Patients in the at-risk groups comprised 24 with respiratory conditions, 12 with cardiac conditions and 10 with diabetes. Six were immunocompromised and four were carers of at-risk patients.

Of those patients in the cardiac at-risk group, six had hypertension. From the information provided by the patients it was clear that they were all on medication, but it was not possible to determine if they were uncomplicated and controlled. Two patients were also self-reporting that they had multiple sclerosis and it is doubtful if this category of patient would have been vaccinated by their own GP.

Patient questionnaire Patients were asked a series of questions to determine their opinion of the pharmacy service and the condition of the room.

Opinion of service Fifty-five patients thought that the injection was administered as well as in the past. Only one patient thought that it was not administered as well. Ten patients would not have had the influenza vaccine if not offered by the pharmacist; the other 46 patients would have gone to their GP for vaccination if not offered by the pharmacist. Fifty-five patients would use the pharmacy to receive other vaccinations if offered in future.

Reason for choosing pharmacy Forty-one patients chose the pharmacy because it was a convenient venue and 30 because the times were convenient. Ten patients chose the pharmacy because they were not aware of their eligibility for influenza vaccination and three were not aware that the GP could provide vaccination.

Room conditions Fifty-four patients said the the room was private, 53 that it was tidy, 51 that it was clean and 47 that it was appropriate for vaccination.

Table 1: GP questionnaire responses

Question	Yes	No
Have you received copies of the vaccination forms	18 (75%)	6 (25%)
Were the copies received in good time	18 (75%)	1 (4%)
Does your practice agree with the decision to vaccinate?	18 (75%)	4 (17%)
Would you support the scheme next year?	16 (67%)	7 (29%)
Would you support extension to other pharmacies?	15 (63%)	8 (33%)
Would you support pharmacist vaccination of over 65s?	7 (29%)	15 (63%)
Would you support other vaccination services from pharmacies?	10 (42%)	13 (54%)

Pharmacist's questioning skills Fifty-four patients agreed that the pharmacist was polite, and 51 said that the questioning was carried out in a sufficiently private environment. Fifty-four said the pharmacist was "professional".

Patient awareness When asked how they became aware of the pharmacy vaccination service, 20 patients said that they had seen a poster in the pharmacy and five that they had been informed by their GP or nurse. Ten patients had heard of it by word of mouth, 24 had read about in the newspaper and five had been informed by the pharmacists. No patients said they had seen a poster in a GP surgery.

GP questionnaire Following the clinics, a questionnaire was sent to all general practices. Twenty-four out of 32 practices (75 per cent) returned completed questionnaires. Table 1 details the responses received.

Of those practices which did not agree with the pharmacist's decision to vaccinate the conditions listed were multiple sclerosis (one patient), immunosuppression (one patient) and uncomplicated hypertension (two patients).

Of those practices that responded, 67 per cent would support the scheme running the following year and 63 per cent would support the extension of the service to other pharmacies. When asked if practices would support community pharmacies vaccinating the over 65-year-age group, only 29 per cent of practices agreed with this suggestion, although 42 per cent of practices would support community pharmacies providing other vaccination services, eg, travel vaccinations.

Practices were asked for their comments on the scheme and seven commented that they thought any additional money should come to practices in order that they could vaccinate their own patients. One practice raised concerns about anaphylactic reactions occurring in the pharmacy. Another was unsure, if the scheme were to be rolled out, how they would estimate the number of influenza vaccines to order for the practice in future years. One practice believed that they were better placed than the pharmacist to identify their at-risk patients.

Of those practices that did not wish either to see the scheme running next year or extended to other pharmacies, some expressed the view that any additional payments should go to the GP practice.

Pharmacist interview After the pilot the two pharmacists who carried out the vaccinations were interviewed regarding various aspects of the pilot. Both thought that the scheme allowed pharmacy to be seen as a full member of the health care team. They also believed that they gained an element of personal satisfaction and confidence in taking on this new role. Their main concern was the number of "walking well" who were not eligible for vaccination under the scheme and who were turned away. This, they believed, represented an unfulfilled demand from the public.

Discussion

The aims of the scheme were to increase the uptake of influenza vaccination in the at-risk groups, provide an element of patient choice and develop and evaluate a new role for pharmacists. Although the numbers of patients who received vaccination by the pharmacist was not large there was considerable public interest in the scheme. The pharmacy took numerous telephone calls from patients and members of the public about the scheme.

The scheme was designed to target patients in the at-risk groups who were aged under 65 years. Patients not falling into this group were referred either to their GP (over-65s) or to private clinics (outside the NHS scheme). However, the largest number of telephone calls (193) were received from members of the public who had no medical condition which put them at greater risk. In future years, if the scheme were to continue to run, it could be expected that numbers of patients using the pharmacy for vaccination would increase as patients became more familiar with the community pharmacy as a venue for vaccination.

It is evident that the majority of the patients who availed themselves of the pharmacy influenza vaccination service thought this a positive experience. Although most of them would have gone to their own GP if the pharmacy service were not available, there were a few who might not otherwise have received vaccination. The clinics were run over lunchtimes and on Saturday mornings to allow patients a choice of venue and times that might fit in with their lifestyles. It is clear from some of the written comments that this proved to be the case.

Concerns were expressed about the risk of anaphylactic reaction and the pharmacist's ability to cope. No serious adverse reactions occurred during this project. One young man fainted during his 10–15 minute recovery period following vaccination but the pharmacist quickly dealt with this in a professional manner. Issues concerning identification of at-risk patients, especially the definition of hypertension, would require to be addressed for future years.

The two pharmacists involved were interviewed after the project and both were positive about their experiences. They considered that the service allowed the provision of an extension of care to their patients and that patients benefited from being given a personal service. The positive publicity surrounding the project also enhanced the professional image of pharmacy.

The GP response to the scheme in some instances was less enthusiastic and this was perhaps to be expected given that the pharmacist was potentially seen as a threat to GP income. Any negative GP comments on the scheme related to the issue of remuneration. GPs were not at that time remunerated on an individual patient basis for the under-65-year-old at-risk group (unlike the over 65s), although they did receive a fixed sum per GP principal for these patients. Recent changes to the new general medical services contract now mean that a fee per patient is payable for influenza immunisation of under-65-year-old at-risk patients. The decision to exclude the over-65s from the pharmacy scheme was made so as not to come into conflict with GPs over loss of income. However, most general practices were in favour of the scheme running next year and even expanded to other pharmacies and other services. There was minimal support for the expansion into vaccination of over-65-year-old patients and this reflected the income issue.

Perhaps of more concern is the issue that GPs appeared not to receive some of the patient vaccination records. The community pharmacists posted these sheets to the patient's practice at the end of every week so this aspect of communication would require to be addressed.

This small pilot study was carried out in one city-centre pharmacy, and it is not possible to extrapolate the findings to suggest how an influenza vaccination service would operate in other pharmacies and in more rural areas. What the study has provided is the basis on which to take forward the expanded public health role of the community pharmacist in vaccination services. Further work in more pharmacies in different settings, city, towns and villages, is required to determine the role of the pharmacist and the impact on public health and well being.

Influenza vaccination is mentioned in the strategy document "The way forward for pharmaceutical public health in Scotland"[12] and will continue to be progressed within Grampian.

Conclusion

Although this is a small study it is possible to say that from both the patient and pharmacist viewpoint the scheme has proved successful and is feasible within a community pharmacy setting.

This scheme is an example of joint working and integration of primary care services achieving enhanced patient provision of a nationally agreed programme. The scheme has offered patient choice and a degree of flexibility not available from some GPs.

Most GPs were supportive of the scheme. The issue of conflicting remuneration still needs to be addressed.

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