

Increasing Influenza vaccination uptake rates in the greater than 65-year-old population

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Abstract

Aims

The aim of this project was to increase the number of patients, over the age of sixty-five, who receive the influenza vaccine in our practice during the 2018/2019 influenza season to 75% or above.

Methods

The project involved the introduction of a dedicated vaccination programme which included both passive and active interventions to increase the uptake of the influenza vaccine in the practice. An Audit was undertaken to assess uptake rates in 2017/2018 and the audit cycle was repeated in 2018/2019 to assess the impact of the programme on vaccine uptake rates.

Results

The percentage of patients over the age of sixty five who received the influenza vaccine in our practice during the 2017/2018 influenza season was 53% (192/359). Following the introduction of the vaccination programme, vaccination uptake rates increased to 68% (254/372) during the 2018/2019 influenza season, and the total number of patients vaccinated in the practice increased to 81% (288/372).

Discussion

This project demonstrated that the introduction of a programme to increase influenza vaccination rates in a General Practice setting can be highly effective. Similar programmes could be replicated across the country if the required resources were provided to General Practitioners.

Introduction

Influenza is a serious infection, which leads to increased hospitalizations and deaths every winter¹. The World Health Organization and EU recommend that 75% of those over the age of sixty-five receive the influenza vaccine annually². Despite this, the influenza vaccine uptake rate, in those over the age of sixty-five, is falling year on year in Ireland, with an uptake rate of 55% for the 2016/2017 influenza season³.

This project aimed to increase the number of patients, over the age of sixty-five, who receive the influenza vaccine in our practice during the 2018/2019 influenza season to 75% or above.

Currently, no formal structure or programme exists around influenza vaccination for patients over the age of sixty-five in General Practices in Ireland. Vaccination occurs on an ad-hoc basis. A register of these patients does not exist within practices, and active vaccination, whereby patients are contacted or formally advised to get the influenza vaccine, does not occur.

This has resulted in a suboptimal influenza vaccination coverage rate of 55% in those over the age of sixty-five in Ireland³. It is critical that this poor uptake is addressed as 90% of all influenza-related deaths occur in those over the age of sixty-five¹. In the 2016/2017 influenza season in Ireland, 95 people died as a result of influenza, or influenza-related complications⁴. Influenza vaccination reduces both the risk of developing influenza and influenza-related complications including death⁵. The European centre for disease prevention and control (ECDC) identified patients over the age of sixty-five as “at risk” patients, who should be vaccinated annually².

Passive and active methods to increase vaccinations rates have been shown internationally to lead to increased vaccination uptake rates⁶. No such studies exist in an Irish context.

The benefits of increased influenza vaccination rates are far reaching. For patients this would lead to a reduction in both cases of influenza and influenza-related complications, leading to a reduction in both morbidity and mortality in this patient cohort. The “herd effect” accrued by increased vaccination rates may also benefit our entire patient population.

On a national level, a reduction in both influenza cases and complications would reduce the financial burden that the health service faces due to influenza, through reduced attendances at primary care and hospital admissions⁷. This has been estimated as a saving per patient for the health service of one hundred and seventeen dollars per patient per annum⁷.

Methods

The project involved the implementation of a dedicated influenza vaccination programme within our practice. This consisted of three stages.

The first stage was raising awareness of influenza and influenza vaccination amongst patients and staff. A staff education programme was designed and implemented to educate staff on influenza, influenza vaccination and on which patients are considered “at risk” using HSE guidelines. Posters and leaflets from the HSE’s influenza campaign were distributed throughout the surgery and in the local shops, churches and community centre.

The second stage of the project involved the passive vaccination stage, where a register of patients over the age of sixty-five was created and this was electronically highlighted on the patient’s chart on opening it. All staff members were involved in identifying patients over the age of sixty-five, in establishing their vaccination status and in offering them the influenza vaccination as they contacted the practice. This also involved the setting up of the walk-in clinic daily from 12-1 where no appointment was required to receive the influenza vaccination.

The third stage of the project was the active vaccination stage, that is, contacting those over the age of sixty-five, who had not been vaccinated, and offering them an appointment for vaccination. This involved two attempts to contact patients followed by a letter in the post in cases where contact was unsuccessful. The patient's vaccination status was also documented during these calls.

The HSE's change model was used as the blueprint on which to plan the development and delivery of the programme⁹.

Results

The overall aim of the project was to increase the number of patients, over the age of sixty-five, who receive the influenza vaccination in our practice during the 2018/2019 influenza season to 75% or above.

This was assessed by auditing the influenza vaccination uptake rates in the 2017/2018 influenza season and then repeating the audit cycle to assess the influenza vaccination uptake rates in the 2018/2019 influenza season, after the vaccination protocol was implemented, and comparing the two.

This revealed that the percentage of patients in our practice vaccinated against influenza increased from 53% (192/359) during the 2017/2018 season to 68% (254/372), in the 2018/2019 influenza season (Figure 1). This figure represents a 33% (254/192) increase in the number of patients vaccinated in the practice following the project's implementation.

217 patients were vaccinated during the passive stage of the project. 155 patients were contacted by phone as part of the active stage of the project. Of those 15 patients were booked in for, and received, vaccinations directly as a result of the active vaccination stage of the project.

When those who received the influenza vaccine in places other than our practice were included in the 2018/2019 figures, this figure increased to 81% (288/372) and this included 33 patients that had been vaccinated in the pharmacy and 13 patients that had been vaccinated in the hospital. 59 patients declined vaccination. This data is illustrated in table 1.

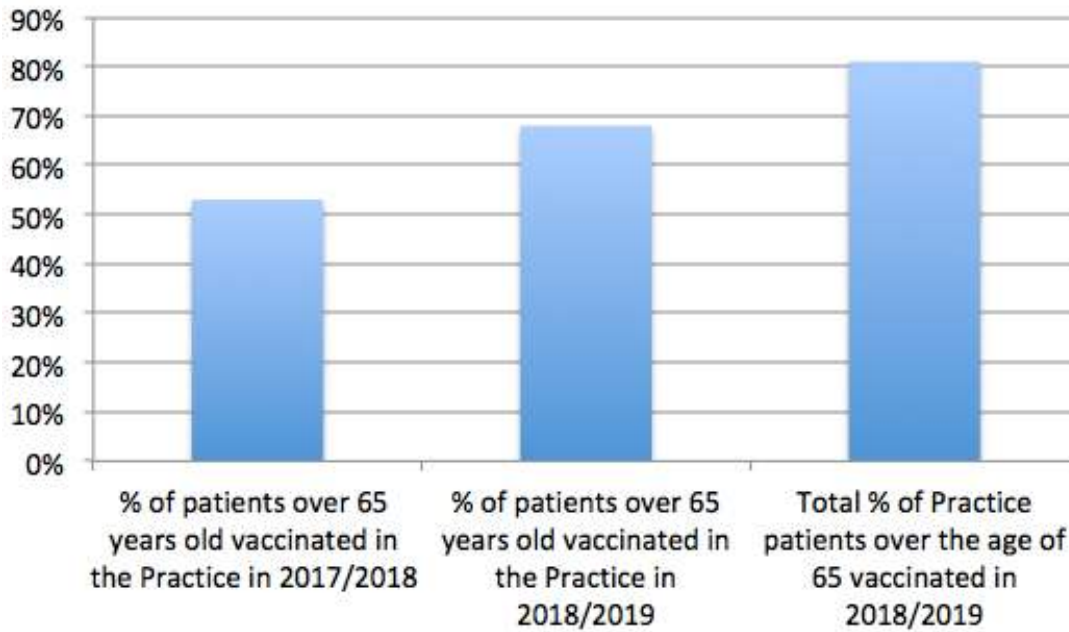


Figure 1: Percentage of patients vaccinated in the 2017/2018 and 2018/2019 influenza seasons.

Number of patients > 65 in 2017/2018	359
Number of patients vaccinated in 2017/2018	192
Percentage of patients over 65 years old vaccinated in 2017/2018	53% (192/359)
Number of patients over 65 in the practice in 2018/2019	372
Number of patients vaccinated in 2018/2019	254
% of patients over the age of 65 vaccinated by the practice in 2018/2019	68% (254/372)
% of total number of patients vaccinated in the practice over the age of 65 in 2018/2019	81% (288/372)
% increase in patients vaccinated in the practice	33% (254/192)
Number of patients contacted in the passive stage	217
Number of patients contacted in the active stage	155
Patients who attended for vaccine following a phone call	15

Patients who received a vaccine in Pharmacy	33
Patients who received a vaccine in hospital	13
Patients who declined vaccination	59
Number of patients who we were unable to contact	13

Table 1: Overall results of the project

Discussion

The aim of this project was to increase the number of patients, over the age of sixty-five, who receive the influenza vaccination in our practice during the 2018/2019 the influenza season to 75% or above. This was achieved.

This project demonstrated that through the introduction of changes in work practice, a significant change could be achieved in a General Practice setting. In our practice, the introduction of a programme around influenza vaccination, lead to an increase in the influenza vaccination uptake rate in patients over the age of sixty-five in our practice. An additional sixty-two patients were vaccinated in total. Further analysis of the data reveals that fifteen additional patients were vaccinated as a direct result of active vaccination, and forty-seven additional patients were vaccinated as a result of the changes that occurred within the practice.

This reveals that the influenza protocol that was introduced within the practice surrounding the passive stage of the programme was, significantly, as important as the active stage of the programme itself. This finding is in keeping with the findings in the literature, which demonstrate that activities such as audit and education, as undertaken within our practice, can lead to an increase in vaccine uptake rates as well as contacting patients directly.

The project also revealed that 16% (59/372) of our patient population declined vaccination. The reasons for this were not formally documented as part of the change project, but as the sole person contacting the patient's, it was evident that fear of perceived side effects was the greatest deterrent to vaccination. This is also consistent with the findings in the literature¹⁰.

Aside from these major findings, the project also revealed that 9% (33/372) of the practice's patient population had received their influenza vaccine at the pharmacist. This provides some data in an Irish context on the percentage of patients that receive the influenza vaccine in the pharmacy versus those that receive it at their General Practitioner. This population would otherwise have been documented as not having received the influenza vaccine. This also illustrates the problem of poor communication between General

Practice and the Pharmacy sector, and importantly, the problems that arise when unique patient identifiers and integrated Information technology systems do not exist.

Finally, the project also revealed that only 3.5% (13/372) of the study population had received the influenza vaccine in the hospital, reinforcing the important role that General Practice plays in influenza vaccination in Ireland.

This project was resource intensive. Although analysis of the resources required was not the focus of the project a brief overview was included. The additional revenue generated from the additional vaccines delivered was €930. The cost of telephoning the patients was estimated at €77 and postage was estimated at €25. The most significant costs associated with the project was staff time. As our practice staff did not receive additional remuneration for this work this was not included as a cost but if both administrative and doctor time had been factored in as a cost, this project would not have been viable.

What this project demonstrates is that influenza vaccination uptake rates can be significantly increased with the implementation of a dedicated vaccination programme, but that there is an administrative and economic burden on General Practices to achieve this. The rolling out of a similar vaccination programme in General Practices across the country, would lead to improved influenza vaccination uptake rates, but would require the remuneration provided to GPs to reflect this additional workload.

Declarations of Conflicts of Interest:

None declared.

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