Factors affecting uptake of the influenza vaccine in older people in primary care

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Introduction

Seasonal influenza is a common viral illness, disproportionately causing significant morbidity and excess winter deaths in older people, that is those aged 65 years and over, and other high risk groups. The National Flu Immunisation Programme recommends that all older people should be offered an influenza vaccine, which is typically delivered in primary care at GP practices, as is the case at Handsworth Medical Practice. However, despite the increased risks of influenza in older people, uptake of the influenza vaccine is relatively modest. This essay explores the factors affecting uptake of the influenza vaccine in older people.

Description: Seasonal influenza vaccination at Handsworth Medical Practice

All registered patients of age 65 years or over are offered a seasonal influenza vaccination, alongside other high-risk groups such as young children and those living with a chronic health condition. Scheduled “flu clinics” are run during October, to which eligible patients are invited to attend. In addition, influenza vaccinations are offered opportunistically by clinical staff during consultations or booked-in to see the practice nurse. In patients for whom attending the practice is a problem, influenza vaccination is also offered during home visits by the practice nurse. I discussed the service with Karen Percival, a practice nurse, on 27/10/14.

Public Health aspects

As a communicable disease, prevention and control of influenza falls under the domain of health protection. Vaccination is the cornerstone of influenza prevention efforts, though sometimes with varying success - it can be problematic due to unpredictability of the influenza season, continuous “antigenic drift”, variable levels of uptake and vaccine efficacy. However, influenza vaccination remains an important intervention in order to prevent influenza-associated morbidity and complications, such as pneumonia, which require hospitalization, particularly in the elderly, contributing significantly to the number of excess winter deaths, many of which are preventable.

In addition to mortality rates, influenza is also a vast source of expense for the health system due to large numbers of hospitalizations, and also for a large proportion of GP consultations. Therefore the influenza vaccination programme is also an important intervention from a health economics perspective, the relatively modest cost of which results in large quality-adjusted life-year gains from the avoided influenza-associated morbidity.

Additionally, selective vaccination of high-risk groups is an example of how epidemiology can be applied to guide clinical practice at a population-level. The discipline of epidemiology is also relevant to the forecasting of influenza epidemics, which impacts upon the implementation of the influenza vaccination programme.
Discussion Topic: Factors affecting and strategies to optimise uptake of influenza vaccine in older people

Influenza vaccination uptake rates in the people aged 65 years and over

Seasonal influenza is estimated to affect 5-10% of adults each year\(^3\). While many individuals experience a relatively minor illness with no lasting sequelae, certain high risk groups are more vulnerable to the influenza virus and experience a more severe illness, often associated with a secondary bacterial pneumonia and a higher mortality rate. In the UK, the majority of deaths associated with influenza occur among older people (people aged 65 years and over)\(^1\). Mortality rates vary annually, with very few cases reported some years, but as high as approximately 21,000 reported in other years (1999-2000)\(^1\). The safest and most effective method of preventing influenza is vaccination\(^3\). It is widely reported that influenza vaccine is less effective at preventing influenza in older adults compared with children and younger adults, however it is reported to reduce the severity of the illness, the frequency of complications and the associated mortality rate\(^4\).

Despite the increased risks associated with influenza in older people, influenza vaccine uptake rates among older people in the UK persistently falls short of the WHO target of 85% uptake in recommended high-risk groups\(^5\). Vaccination among adults aged 65 years and over was introduced into the influenza vaccination programme in 2000-2001, and increased from 65.4% uptake in England in 2000 to 75.3% in 2005-2006, and remained relatively constant since, dropping to 72.4% in 2009-2010, and 73.2% in 2013-2014 (rates are consistently slightly higher in Scotland and Northern Ireland, but consistently significantly lower in Wales (67.7% in 2013-2014))\(^1\).

Factors affecting influenza vaccination uptake among older people

Multiple factors have been shown to influence uptake of influenza vaccination in populations of older people. An international systematic review\(^6\) and a nationwide General Practice survey\(^7\) revealed that the most significant factor was the patient’s perception of the side-effects and effectiveness of the vaccine. Fear of side-effects was reported to be due to previous personal experience of side-effects, but more commonly to the perceived risk of side-effects, based on pre-existing knowledge or incomplete information of the vaccine. A general mistrust of the vaccine contents was also regularly reported to be an influencing factor, as also found in a UK-based review\(^5\). Of those who refused the vaccination, many studies reported that their reason was because of perceived poor vaccine efficacy, making it not worth the risk of side-effects\(^6\). Fear of interaction between the vaccine and polypharmacy was also reported in multiple studies\(^6,8\), and is a concern largely limited to an older population.

Personal health beliefs and behaviours were also shown to often have a negative impact upon vaccine uptake\(^5\), because many older people did not consider themselves particularly vulnerable to influenza or perceive themselves to be at risk. Interestingly, those of higher socioeconomic status typically perceived themselves to be at a lesser risk of influenza\(^5\). Similarly, Eilers et al reported that many older people did not recognise the potential severity of influenza and the complications associated with it\(^5\). This was more typically associated with having had no experience of influenza in the past. Those who had experienced influenza were reported to be more likely to be vaccinated\(^9\), and receiving a previous influenza vaccination was associated with an increased likelihood of receiving future vaccinations\(^4\).
The strongest predictor of vaccine uptake has been reported to be personal recommendation by health professionals during consultations. Receiving information about influenza and the importance of being vaccinated, and advice about potential side-effects were all cited as reasons for receiving the influenza vaccination. The combination of advice from a doctor, alongside a personal reminder such as a letter, was found to be the most significant driver of vaccine uptake in UK studies. Recommendations from family members were also found to be significant, particularly if the older person lived with another older person or if they perceived it was something that their family or friends would want done. However, family and friends were also found to exert negative influence with regard to reporting side-effects or having heard of a friend’s bad experience of the vaccination.

Logistical barriers also had a negative influence upon vaccine uptake. Poor mobility was commonly reported as a factor for not receiving the influenza vaccine, as were long waiting times in busy clinics. Despite previously mentioned findings regarding risk perception, older people of a higher socioeconomic status were more likely to have access to transportation, associated with a higher vaccine uptake.

Strategies to optimise uptake of the influenza vaccine among older people

Various interventions have aimed to increase uptake of the influenza vaccine by increasing community demand. In some, this involved sending reminders through various mediums such as letters, leaflets and text messaging to encourage attendance at vaccination clinics. While this was found to have a modest influence upon uptake rates, it was found that education-based interventions, involving an explanation and an opportunity to address the patient’s concerns and health beliefs regarding the vaccine, were significantly more effective. The intervention was typically delivered by nurses and pharmacists, rather than medical staff. Although this may seem common-sense, it demonstrates that many older people need the opportunity to discuss their concerns and health beliefs, and without specifically creating this opportunity within an intervention, they do not otherwise have one.

Improving access to influenza vaccination was another frequently used strategy. Opportunistic vaccination during home visits by medical and nursing staff was reported to increase uptake rates significantly, even in patients who may be able to attend the practice at other times, most likely associated with mobility and transportation difficulties faced by many older people. Group visits of older people to attend the GP or nurse for vaccination were also found to increase uptake rates slightly in comparison with individual routine care.

System-based interventions were also considered in various studies and reviews. Overall, it was found that interventions such as automated reminders for general practitioners and electronic feedback on current influenza vaccination uptake rates encouraged clinicians to discuss the vaccine with older patients, thereby increasing uptake rates. A nationwide survey of UK general practice reported that system-based interventions involving the management of the vaccination campaign were most significant. The most effective strategy involved appointing a lead member of staff responsible for planning the vaccination campaign and reporting on practice performance and this was associated with an 8% increase in uptake in older people. The use of IT to allow real-time monitoring of performance and uptake rates was also found to increase uptake. Overall, they highlighted the need for leadership and communication within the practice about current performance. Financial incentives to reach certain uptake rates were also found to be effective.
Conclusion

The challenges faced in order to increase uptake of the influenza vaccination in older people are due to both individual and system-based factors. In order to improve uptake at a population-level, it is important to address patients’ concerns and health beliefs at an individual-level. This action was observed on several occasions at Handsworth Medical Practice and there was also a strong element of health promotion and education involved within the influenza vaccination programme. Furthermore, the literature reviewed also highlighted system-based interventions to improve practice performance regarding vaccination, some of which were in operation at the practice.

References