Preparedness of Elderly Long-term Care Facilities in HSE East for Influenza Outbreaks

Abstract:
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Introduction
Influenza is a challenging problem in long-term care facilities (LTCFs) for the elderly, causing considerable morbidity and mortality amongst this vulnerable population. Illness rates up to 60% have been seen in influenza outbreaks in LTCFs with mortality rates of 5-10% reported. The closed environment of LTCFs and limited mobility of clients facilitates transmission of influenza. In addition, influenza may be difficult to detect in the LTCF population due to atypical presentation, with minimal fever and respiratory symptoms. A combination of interventions is required to prevent an outbreak of influenza at a LTCF. These include vaccination of clients and health care workers (HCWs), regular staff education on influenza detection and control, and a designated flu lead to co-ordinate and implement an influenza prevention and control programme for individual LTCFs. There are 166 LTCFs for the elderly in the Health Service Executive (HSE) East area.

Outbreak detection and management
Most (73%) LTCFs had an influenza outbreak plan specific to their facility. Those with a plan were significantly more likely to have HCV vaccination rates of ≥40% (p=0.013). Ninety percent of LTCFs had a process to monitor for outbreaks, with 58% response rate. Staff flu vaccine uptake rates were >75%; leading barriers were client anxiety and consent issues. Target flu vaccine uptake of ≥ 40% in staff occurred in 43% of facilities and was associated with staff vaccine administration by a facility-attached GP (p=0.035), having a facility outbreak plan (p=0.013) and being a non-HSE run facility (p=0.013). Leading barriers were staff personal anxiety (94%) and lack of awareness of the protective effect on clients (21%). Eighty-nine percent found Public Health helpful, and requested further educational support and advocacy. Staff vaccine uptake focus, organisational leadership, optimal vaccine provision models, outbreak plans and Public Health support are central to the influenza campaign in elderly long term care facilities.

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We assessed preparedness of HSE East elderly long term care facilities for an influenza outbreak, and identified Public Health Department support needs. We surveyed 166 facilities based on the HSE checklist document for influenza outbreaks, with 59% response rate. Client flu vaccination rates were >75%; leading barriers were client anxiety and consent issues. Target flu vaccine uptake of ≥ 40% in staff occurred in 43% of facilities and was associated with staff vaccine administration by a facility-attached GP (p=0.035), having a facility outbreak plan (p=0.013) and being a non-HSE run facility (p=0.013). Leading barriers were staff personal anxiety (94%) and lack of awareness of the protective effect on clients (21%). Eighty-nine percent found Public Health helpful, and requested further educational support and advocacy. Staff vaccine uptake focus, organisational leadership, optimal vaccine provision models, outbreak plans and Public Health support are central to the influenza campaign in elderly long term care facilities.
vaccine rates. Approximately 9% of LTCFs provided training and education on influenza preparedness for staff on commencement of employment, 34% provided it annually at the start of influenza season and almost 24% provided it at both of these times. This information was provided by the staff influenza lead or local infection control nurse in the majority of cases (84%).

Interaction with Public Health

Most (75%) LTCFs reported previous contact with Department of Public Health, while 23% had previous contact specifically with regard to an influenza/ILI outbreak. Eighty-nine percent of responders reported that Public Health were helpful or very helpful. Suggestions on how Public Health could support LTCFs preparedness for an outbreak in Ireland included provision of education and resources e.g. e.g. access to education and training of staff, outbreak information packs; advocacy for the use of medication protocols to facilitate administration of the vaccine by the trained in-house staff, and dissemination of more information to increase public awareness of the seriousness of influenza illness.

Discussion

Preparedness and mitigation of influenza outbreaks within LTCFs requires high levels of vaccination of HCWs and residents, early recognition of illness and timely response. We found that 43% of LTCFs reached the HSE target of 40% HCW vaccine rate, with HSE-run facilities significantly more likely to be under target. Globally, immunisation rates of HCWs against influenza are low, despite it being a recommendation in most countries. Studies of HCWs in Germany and the UK found influenza immunisation rates of 18% and 34% respectively. Our findings of reported barriers for HCWs are consistent with other research. Vaccine related anxiety was an almost universally reported barrier to HCW vaccination in our study (94%). Anxiety can be diminished by improving understanding with further education. Many HCWs perceive themselves to be healthy and therefore either not at risk of influenza or able to successfully fight off the influenza illness. Similar to previous studies, we found that HCWs do not necessarily see that by having influenza vaccine themselves, they are protecting their vulnerable clients. Twenty-one percent of responses were in this category. Additional education and discussion would help HCWs understand their ethical responsibility to protect clients from influenza. Our study highlights the connection between lack of access to vaccine and below target vaccine uptake in HSE-run facilities. Improved staff access should be facilitated through the delivery of the vaccine at place of work, preferably at unit level, as well as the provision of influenza vaccination clinics outside of usual working hours. These measures have been shown to improve HCW vaccine rates.14 We found that the administration of the vaccine by GPs attached to the LTCF was associated with reaching the uptake target and this model could be considered by all LTCFs. The appointment of a designated flu lead in each LTCF receiving education and training, supported by a medication protocol would facilitate on-site delivery of the vaccine to HCWs. In LTCFs with day/respite and residential care clients are more vulnerable to the introduction of community influenza strains. A significantly lower level of staff vaccine uptake was identified and this should be a target in future campaigns.

A strength in our study was that we received responses from both private and HSE-run LTCFs allowing us to identify preparedness and vaccination outcomes that may be related to a specific type of LTCF. Responses were received from LTCFs of all sizes which gave us an overview of the preparedness across the sector. The response rate of 58%, although suboptimal, was anticipated. It reflects the regional situation. The majority of LTCF managers reported a high level of preparedness for an influenza outbreak in the areas of outbreak policies, illness monitoring protocols and influenza leads. However, the majority of LTCF managers with a written outbreak plan were significantly more likely to reach the HSE HCW vaccine target. Although LTCFs reported easy access to viral swabs, masks, vaccine and anti-virals, an anti-viral supply problem occurred in Ireland this season and it was clear that most LTCFs were relying on the national commercial supply chain. Securing this supply would permit timely response to outbreaks. LTCFs felt that increased public awareness of the seriousness of influenza was warranted; LTCFs repeatedly requested facilitated educational sessions to inform staff about influenza and the importance and preparedness. While guidance material has been made available to LTCFs, assistance from Public Health departments in meeting with senior staff and providing education sessions to HCWs can be a valuable support.

Irish guidelines recommend that residents of LTCFs should receive seasonal influenza vaccine, with a World Health Organisation target of 75% vaccination rate for this group. While all responders achieved this target, barriers were identified, namely; personal anxiety about the vaccine (52%) and consent issues (25%). For clients unable to give consent, we found that a proxy-giver was often sought and, in the event of death, this too was confirmed to the LTCF. Most LTCFs reported a majority of clients aged 80 or older. Previous studies inform us that in this age-group vaccine effectiveness has been estimated at 30-40%. Even at low effectiveness levels, while not sufficiently protecting elderly residents from influenza, vaccination of residents does protect against hospitalisation and death. Vaccination of staff has been shown to reduce mortality and ILI amongst LTCF residents. Responders had a high awareness of the HSE checklist and those facilities with a written outbreak plan were significantly more likely to reach the HSE HCW vaccine target. Although LTCFs reported easy access to viral swabs, masks, vaccine and anti-virals, an anti-viral supply problem occurred in Ireland this season and it was clear that most LTCFs were relying on the national commercial supply chain. Securing this supply would permit timely response to outbreaks. LTCFs felt that increased public awareness of the seriousness of influenza was warranted; LTCFs repeatedly requested facilitated educational sessions to inform staff about influenza and the importance and preparedness. While guidance material has been made available to LTCFs, assistance from Public Health departments in meeting with senior staff and providing education sessions to HCWs can be a valuable support.

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References


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