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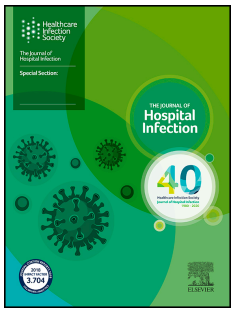

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Short report

Healthcare staff perceptions towards influenza and potential COVID-19 vaccination in the 2020 pandemic context

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SUMMARY

The COVID-19 pandemic generated renewed focus on infectious disease transmission in healthcare settings. This study aimed to evaluate staff perceptions towards influenza vaccination in the COVID-19 context. All healthcare workers within a major UK tertiary referral hospital were invited to answer a survey conducted from September 2nd to 13th, 2020. In all, 593 responses were received across a spectrum of roles; 44% reported they were more likely to get an influenza vaccine this year due to COVID-19; however, 10% felt that an influenza vaccine was less important due to social distancing. Additional questions evaluated intention to receive COVID-19 vaccination. There were substantial differences of opinion between staff groups.

Keywords:

COVID-19

Influenza

Vaccination

Healthcare workforce

Introduction

Healthcare workers (HCWs) have a high risk of exposure to occupationally associated infectious diseases [1]. Vaccination of HCWs is encouraged to reduce the risk of infection of hepatitis B, tuberculosis, and seasonal influenza [2–4]. Vaccination for seasonal influenza is seen as particularly important not only to protect staff and patients, but also to ensure that seasonal workforce sickness rates do not compromise care. Despite the importance of these programmes there remains reluctance from some HCWs to receive vaccination for numerous reasons, thus triggering research on how best to increase immunization rates in National

Health Service (NHS) staff in the UK [6,7]. In some settings mandatory influenza vaccination has been proposed or implemented [8].

In the Northern Hemisphere there were significant concerns that seasonal influenza could co-circulate during surges of SARS-CoV-2 activity during the COVID-19 pandemic, placing significant burdens on healthcare services [9]. There was also a risk that co-infections with SARS-CoV-2 and influenza or other respiratory viruses might increase morbidity and mortality [10]. Therefore a survey was conducted to understand the perceptions of HCWs towards receiving routine seasonal influenza vaccination for the 2020/21 season, and to understand the attitudes of HCWs to vaccination against the new COVID-19 context. The aim was also to understand staff perceptions towards receiving vaccination against SARS-CoV-2 ahead of the introduction of these vaccines. This research will be relevant to future winters, as it is likely that influenza and COVID-19 will coexist.

Methods

An electronic survey of staff members was conducted at University Hospitals Coventry & Warwickshire NHS Trust (UHCW), a 1250-bed major tertiary referral centre in the West Midlands region, employing just over 9000 full-time equivalent staff and providing a full spectrum of paediatric, obstetric, adult, neurosurgery, and trauma services. The centre went on to be the first globally to administer the first approved Pfizer/BioNTech COVID-19 vaccine outside a clinical trial.

The survey was designed to identify perceptions of healthcare workers towards receiving routine seasonal influenza vaccination in the context of the COVID-19 pandemic, as well as understanding staff perceptions towards receiving a COVID-19 vaccination in the future. The survey was live from September 2nd to 13th, 2020.

The survey was designed by a multi-disciplinary collaboration of clinicians and research and development staff, including a consultant virologist, consultant microbiologist and an infection prevention and control nurse. It was based on the previously published survey at this organization on staff perceptions towards antibody testing, and it utilized a number of the same constructs [11]. The survey comprised a mixture of Likert-based responses and binary responses depending on question type, with 32 questions in all. The survey was developed using GoogleForms software and ethical approval was granted through the Trust's COVID-19 ethics committee (GAFREC ID: GF0416). It was distributed electronically through a rolling advert on the intranet homepage alongside group e-mails to staff members. Staff were advised that the survey was voluntary. The results were analysed using descriptive and semiquantitative methods, with subdivision of results depending on staff roles.

Results

In all, 593 responses were received from the 9000 Trust HCWs, yielding a response rate of 6.5%. Responses were received from 152 medical staff (28.2%), 144 nursing staff (27.7%), 89 administrative staff (16.5%), 48 allied health professionals (9.1%), 40 managers (7.4%), and 26 healthcare assistants (4.8%).

The mean duration of NHS employment for respondents was 15.3 years. In response to the question 'How often do you get the annual influenza vaccine?', 332 staff (59.5%) reported that they got an influenza vaccination every year without fail, while 96 (17.7%) reported that they got an influenza vaccine most years, 33 (6.1%) reported they got an influenza vaccine some years, 38 (7.0%) reported that they got an influenza vaccine occasionally and 52 (9.6%) reported that they never got vaccinated. Figure 1 reports the relative importance that staff placed on different motivations for getting an annual influenza vaccine.

Table I records staff perceptions regarding both influenza and potential COVID-19 vaccination, with the majority of staff identifying the need to vaccinate in order to protect themselves, their families, and their patients as the driving reason to get vaccinated. A total of 471 staff (83.4%) reported that if a fully approved COVID-19 vaccine became available, freely distributed through their employer, with appropriate safety and efficacy data, they would be likely or very likely to get a vaccine.

Discussion

This was an electronically distributed survey with a relatively large number of responses (albeit low response rate) despite the confines and challenges of the COVID-19 pandemic. The overall responses to questions regarding influenza vaccination were encouraging, with 75% of respondents identifying the need to protect themselves, their family, and their patients, and suggesting that they were likely to present themselves for vaccination. These responses were consistent with the reports that 60% of respondents got the influenza vaccine every year, and a further 20% most or some years. These 20% represent an important group to target and to understand motivations because they are clearly not anti-vaccination but are likely to get vaccinated when access is easy rather than to actively seek out vaccination.

There was an important minority (10%) who felt that influenza vaccination was less important for the 2020/21 season because they perceived that social distancing provided adequate protection. Although influenza rates during the winter of 2020/21 have been very low, this may point to growing complacency in future years, despite the ongoing likelihood that SARS-CoV-2 and influenza viruses will coexist [12]. Fortunately, a greater number of

HCWs (44%) reported that they were more likely to get an influenza vaccine this year due to the COVID-19 pandemic.

The motivation for respondents to receive an influenza vaccination showed important findings, despite substantial problems with staffing healthcare services over the COVID-19 pandemic. Reducing workplace absences was seen as the least important reason to get an influenza vaccine. Regarding incentivization, opinion was divided, with 28.2% in favour of, and 37.8% against; this is an area that needs careful ethical consideration.

A substantial proportion (18%) felt that people not getting an influenza vaccine should not receive sick pay if they were absent from work with influenza-like symptoms. Unfortunately, no data were available from the pre-COVID-19 period to determine whether experience of staff absence due to COVID-19 had influenced opinion. Remarkably, around one-quarter felt that HCWs refusing COVID-19 vaccine who then had to self-isolate following contact either at or outside work should not be paid. Possibly this indicates a greater personal responsibility during the pandemic, or a perception that influenza is less serious.

Despite the disruption caused by the COVID-19 pandemic, not all respondents reported that they were likely to get a COVID-19 vaccine. However, easy access to vaccination was important, with only 58% being prepared to get a COVID-19 vaccine outside of their normal working hours, and 53% prepared to travel to another site. It will be important to retrospectively consider COVID-19 vaccine uptake rates once rollout has been completed, and to understand what features drove the increased uptake across differing vaccination strategies throughout the NHS. There was relatively broad consensus that NHS staff should be prioritized for COVID-19 vaccination and even more so those in frontline patient-facing roles. Whereas it could be argued that it is not surprising that HCWs would see themselves as priorities for vaccination, it is notable that a large proportion of non-frontline, non-patient-facing staff indicated that their frontline colleagues should be prioritized. However, the vaccine rollout in the UK actually placed social care staff and patients ahead of NHS staff [13].

This study has a number of strengths, including a relatively large sample size across the full range of HCW job types. We believe that our work provides a unique insight into HCW perceptions regarding influenza and COVID-19 vaccination in the context of the COVID-19 pandemic. There are, however, a number of limitations, including the single-centre nature of the study, and the fact that the study was performed before much information about the imminent COVID-19 vaccines was available. The survey was distributed to all staff members at the organization via e-mail and the intranet webpage, ensuring that all staff had the

opportunity to complete the survey, however, we cannot be certain that the results are truly representative of HCW attitudes, due to the rather low response rate.

Perhaps the main importance of this research is to lay foundations for important future studies reviewing the actual uptake of vaccinations. It will be important to determine the reasons given by HCWs for taking up or declining influenza and/or COVID-19 vaccination. It will also be important to monitor ongoing perceptions of COVID-19 vaccination. Particular focus is needed around vaccine reticence among healthcare workers and ensuring uptake across all demographic groups.

Conflict of interest statement

None declared.

Funding sources

None.

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Table 1

Perceptions of healthcare staff towards COVID-19 and influenza vaccination

Statement	Strongly agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly disagree (%)
'Getting a flu vaccine is important to enable me to treat patients with flu, without fears of becoming infected myself.'	35.4	35.1	19.0	7.8	2.7
'Getting a flu vaccine is important to enable me to treat patients during "flu season" without the risk of inadvertently infecting patients.'	44.7	32.4	14.5	6.4	2.0
'Getting a flu vaccine will be less important this year as social distancing means there will be reduced transmission of flu in the community.'	2.3	7.5	10.7	37.6	41.9
'The COVID-19 pandemic has made me more likely to get a flu vaccine this year.'	25.0	18.5	28.5	19.7	8.3
'Getting a COVID-19 vaccine would be important to enable me to treat patients with confirmed or suspected COVID-19, without fears of becoming infected myself.'	33.2	31.0	23.2	8.6	4.1
'People who choose to have the flu vaccine this year should have priority to receive a COVID-19 vaccine.'	0.0	20.8	38.1	27.3	13.9
'People who do not have a recommended flu vaccine should not be paid for any sick leave if they develop flu like symptoms?'	4.8	13.2	15.3	32.4	34.2
'I think staff who decide not to get a COVID-19 vaccine when such a vaccine becomes available should not be paid to self-isolate if they are exposed to COVID-19 outside the workplace.'	9.1	18.5	16.4	26.4	29.6
'I think staff who decide not to get a COVID-19 vaccine when such a vaccine becomes available should not be paid to self-isolate if they are exposed to COVID-19 whilst at work.'	8.0	16.4	17.1	26.5	32.0
'The NHS should provide an incentive to staff who choose to have a flu vaccine.'	0.0	28.2	28.8	29.8	13.2
'I would be prepared to get a flu vaccine from UHCW outside my normal working hours (e.g. at a weekend).'	19.7	25.8	11.8	26.7	15.9
'I would be prepared to get a flu vaccine from UHCW whilst in my car.'	31.6	36.4	12.6	12.6	6.8
'I would not mind waiting in a (socially distanced) queue to get my flu vaccine.'	30.5	45.8	11.0	8.8	3.9
'I would be prepared to travel to another location to get a flu vaccine.'	15.8	23.4	16.7	26.3	17.8

'I would be prepared to get a COVID-19 vaccine from UHCW outside my normal working hours (e.g. at a weekend).'	29.9	29.0	11.7	17.8	11.7
'I would be prepared to get a COVID-19 vaccine from UHCW whilst in my car.'	35.3	33.2	11.8	11.6	8.2
'I would not mind waiting in a (socially distanced) queue to get my COVID-19 vaccine.'	35.1	41.5	10.1	7.2	6.0
'I would be prepared to travel to another location to get a COVID-19 vaccine.'	24.6	28.5	15.0	17.9	14.1
'NHS workers should be prioritized to get a COVID-19 vaccine.'	45.2	32.6	13.8	4.9	3.5
'Front-line staff directly treating patients at UHCW should be prioritized for a COVID-19 vaccine over non-patient facing roles.'	55.4	27.4	8.1	5.4	3.6

COVID-19, coronavirus disease 2019; NHS, National Health Service; UHCW, University Hospitals Coventry & Warwickshire NHS Trust.

Figure 1. Staff perceptions regarding factors important when considering flu vaccination. Bars: blue, very important; red, important; orange, minimal importance; green, not a relevant factor.