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Mandatory policies for influenza vaccination: Views of managers and healthcare workers in England

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ABSTRACT

Introduction: Mandatory policies have the potential to increase uptake of influenza ('flu') vaccination among healthcare workers (HCWs), but concerns have been expressed about their acceptability and effectiveness. We explored views on three mandatory policies (declination forms, face masks or reduced patient contact, and mandatory vaccination) among both HCWs and flu vaccination programme managers in the National Health Service (NHS) in England.
Method: A mixed method approach was employed. An online cross-sectional survey was conducted with staff responsible for implementing influenza campaigns in NHS trusts (healthcare organisations) in England ($n = 72$ trusts). The survey measured perceived effectiveness of the three mandatory policies and perceived support for them among HCWs. Qualitative interviews were conducted in four trusts, with influenza campaign managers ($n = 24$) and with HCWs who had the opportunity to receive the influenza vaccination ($n = 32$). Interviews explored respondents' views of the three strategies and were analysed thematically using QSR NVivo 11 All data were collected shortly after the 2016/2017 influenza season.
Results: In the survey, views varied on the effectiveness of the three policies and none of the interventions were thought to be strongly supported by HCWs, with particularly low levels of support perceived for mandatory vaccination and for face masks or reduced patient contact. The qualitative interviews revealed substantial concerns around the practicability and enforceability of mandatory policies and the potential discriminatory effect on HCWs who made a principled decision or had medical reasons for exemption. Additional doubts were also expressed regarding the effectiveness of face masks and their potential to worry patients, and the ethics of compelling staff to accept medical intervention.
Discussion: Mandatory vaccination and face masks would not be strongly supported if introduced in the UK. If declination forms are adopted, they should be used in a constructive intelligence-gathering manner which avoids stigmatising HCWs.

1. Introduction

Seasonal influenza ('flu') vaccination is recommended for healthcare workers (HCWs) to reduce risk of transmission of influenza to patients and illness-related absence [1–3]. However, HCW uptake of influenza vaccination is sub-optimal in many countries [4], including England where the national average still falls below the national target of 75% [5] despite increases over the past decade [1].

Various recommendations have been made to improve uptake both in the UK and other countries, including educational strategies to raise awareness and address concerns, and implementation strategies to improve vaccine accessibility [6–9]. However, it has been suggested that these may not be sufficient to raise uptake to recommended levels, and that mandatory approaches may be needed [10–12]. Mandatory approaches could include requirements for non-vaccinated HCWs to complete a 'declination form' stating their reasons for non-vaccination; non-vaccinated HCWs to wear a face mask during patient contact (or to have reduced patient contact during influenza seasons); and mandatory vaccination of all HCWs, usually allowing exemptions on medical or religious grounds. These approaches can work singly or in conjunction with one another [13]. Each approach is now briefly reviewed.

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1.1. Declination forms

Declination forms are thought to have a potential educational effect – encouraging non-vaccinated HCWs to re-appraise their decision not to be vaccinated – or to act as a 'lesser of two evils', whereby the perceived inconvenience of completing a form may outweigh the perceived inconvenience of receiving the vaccination [14]. In some instances, declination forms require staff to 'attest', sometimes in the presence of managers, that they have read and agree with statements regarding the safety and protective effect of the influenza vaccination, suggesting that they can also act as a form of managerial pressure [13]. It is suggested that declination forms are unlikely to influence the position of staff who have strong views on vaccination, but may shift those who are undecided or have not previously given the issue much thought [14].

1.2. Face masks

The rationale for requiring non-vaccinated HCWs to wear face masks is to offer protection to themselves and patients from influenza virus infection [15]. As with declination forms, it is suggested that the requirement to wear a mask may make HCWs re-evaluate their vaccination decision [11]. Some studies have suggested that mandating face masks for non-vaccinated HCWs is associated with increased uptake but, as with the evidence on declination forms, the policy has usually been implemented alongside other measures, meaning that it is difficult to assess its specific contribution [11]. This approach has attracted considerable criticism because of the unproven effectiveness of face masks in protecting against influenza transmission, and because face masks visually identify non-vaccinated staff, leading to stigmatisation, and may hinder effective communication between HCWs and patients [14].

1.3. Mandatory vaccination

It is argued that a mandatory influenza vaccination policy can improve uptake where 'softer' or more 'permissive' approaches have failed to deliver sufficient improvements [10,16,17]. A recent NICE (National Institute for Health and Care Excellence) systematic review reported low quality evidence that a mandatory influenza vaccination policy (sometimes in conjunction with declination forms or a face mask policy) was associated with increased uptake [18]. However, the issue is controversial, particularly as sanctions for non-vaccination without valid reasons for exemption can include termination of employment [19]. Mandatory approaches to influenza vaccination are growing in popularity in, for example, some healthcare organisations and states in North America [13,20], but have not been generally been adopted or widely supported in the UK or the rest of Europe to date. This is despite the existence of mandatory policies in some countries for other vaccine-preventable diseases, such as hepatitis B and measles [21]. This suggests that HCWs' views of mandatory vaccination may be "vaccine-specific, profession-specific and patient-specific", as well as being influenced by culture, legislative and healthcare system differences [21].

This paper explores the views of HCWs and influenza campaign managers across the NHS in England on the perceived effectiveness and acceptability of such approaches.

2. Method

2.1. Design

A mixed methods design was employed. An online cross-sectional survey was conducted with staff involved in implementing local influenza campaigns (known as 'flu leads') to assess their views on whether mandatory policies would increase vaccination uptake in HCWs and whether HCWs in their NHS trust (an organisation within the English NHS serving either a geographical area or a specialised function such as an acute hospital or ambulance service) would support each mandatory approach. Qualitative in-depth interviews with flu leads and HCWs (n = 56) were conducted to explore experiences of, and views on, the recent influenza campaign and on different approaches for encouraging uptake of the vaccine. Data were collected from NHS trusts in England (including acute, mental health, community, and ambulance trusts) shortly after the 2016/2017 influenza season.

3. Survey of perceived effectiveness and acceptability of mandatory approaches

Questions about mandatory vaccination policies were included as part of a larger online cross-sectional survey (conducted June–August 2017) which explored how aspects of influenza campaign implementation influenced vaccination uptake [6]. Survey respondents were flu leads - members of staff designated to help plan, promote, and deliver the influenza campaign in their local trust. Some trusts had a single flu lead, while others had multiple designated members of staff. All flu leads were informed about the study by e-mail by NHS Employers, the organisation responsible for national coordination of the influenza campaign in NHS trusts, and given two weeks to opt out. Prospective respondents who had not opted out were invited to participate via a unique link to an online survey.

The survey included two measures on '*possible strategies for increasing vaccination uptake*'. Respondents were first asked to indicate to what extent they perceived that three mandatory policies would be effective or ineffective in increasing vaccination uptake among HCWs in their NHS trust: (1) 'Declination or opt-out forms (i.e. staff who do not take up the vaccination have to fill in a form'); (2) 'Non-vaccinated staff have to wear face masks during direct patient contact in the influenza season or have reduced patient contact'; and (3) 'Mandatory policy for all staff directly involved in patient care to have the influenza vaccination'. Responses were provided on a five-point scale (*1 = Very Effective – 5 = Very ineffective; Don't know*) and collapsed into three categories for analysis: (1) would be effective; (2) would be ineffective; (3) Neutral or do not know.

Respondents were then asked to what extent they thought that HCWs in their NHS trust would support or oppose the three mandatory policies to increase influenza vaccination uptake. Responses were provided on a five-point scale (*1 = Strongly support – 5 = Strongly oppose; Don't know*) and collapsed into three categories for analysis: (1) HCWs would be supportive; (2) HCWs would be opposed; (3) Neutral or do not know.

3.1. Qualitative interviews

Qualitative interviews were conducted with staff in four NHS trusts in England. Sample selection was divided into two main stages.

3.1.1. Stage 1: selection of trusts

Trusts were selected through discussions with the organisation NHS Employers. Using seasonal influenza vaccination uptake data for 2015/16, we identified two areas of the country which comprised a cross-section of trust types and range of levels of uptake (North and South East). NHS Employers then provided the researchers with contact details of flu leads in 12 trusts, six in each area, representing different trust types and levels of uptake. From

Table 1
Sample of study trusts: qualitative interviews.

Trust ID	Study area	Type of trust	HCW uptake of vaccination in previous (2015/2016 season)
Trust A	North England	Community and Mental Health trust	>60%
Trust B	North England	Community and Mental Health trust	<30%
Trust C	South East England	Acute trust	>60%
Trust D	South East England	Acute trust	<30%

this list, the research team purposively selected a sample of four trusts to represent two main trust types (acute; community and mental health), while at the same time allowing for comparison by level of vaccination uptake within each area (Table 1). In addition, we identified trusts of the same type in each area so we could draw more meaningful comparisons regarding factors associated with uptake. NHS Employers then contacted flu leads in these four trusts to ask if they were willing in principle to support the study. All agreed and were subsequently contacted by the research team.

3.1.2. Stage 2: selection of participants for interview

We sought to include in the sample both staff with responsibility for implementing the influenza campaign locally (including both each trust's designated flu lead and other relevant managers and implementation staff) and local HCWs, some of whom had been vaccinated and others who had opted not to be vaccinated in the previous (2015/2016) season. Local flu leads for each trust were contacted initially by email/letter, including a study information sheet, and followed up by telephone. Interviews with designated flu leads were conducted first, following by interviews with senior managers and key members of the local implementation team. Flu leads had a key role in both introducing the researchers to other managers involved in implementing the local influenza campaign and in negotiating access to local line managers to facilitate the interviews with HCWs. These line managers then raised awareness of the study amongst their local teams and distributed participant information sheets. HCWs who expressed an interest in the study were invited to contact the researchers to discuss participation. In all cases, informed consent was obtained either immediately before the interview or via email in advance. All of the qualitative interviews were conducted either face-to-face or by telephone, lasted 30–45 minutes, and explored a range of issues including how the recent influenza campaign had been implemented, attitudes towards vaccination, and views on different approaches for encouraging uptake of the vaccine, including the use of mandatory approaches. Between 13 and 15 individual interviews were conducted in each trust.

4. Analysis

Survey data were analysed using SPSS Version 23. Duplicate responses from the same trust were excluded by either selecting the most complete response from a trust or, if two or more complete responses were provided a single trust, by random selection of one response. Descriptive statistics were used to examine the types of trusts which had responded. Frequencies were used to examine how many flu leads perceived each mandatory policy would be effective at increasing vaccination uptake and how many perceived that each mandatory policy would be supported by HCWs in their NHS trust.

All in-depth interviews were digitally recorded with participants' consent and transcribed verbatim for analysis using QSR NVivo 11 software and analysed thematically. Analysis of full transcripts was conducted by two teams; one team analysed the data for flu leads and managers and the other for HCWs. In each case the lead researcher established a set of themes based on the core questions and topic areas which were then refined by re-reading sample transcripts. In each case, two researchers were responsible for coding the textual data with reliability assessed by cross-examination. Discussions between the researchers responsible for undertaking the interviews enabled resolution of interpretative difference. The analyses allowed the investigation team to identify patterns across the two separate sets of data.

5. Ethics

Heath Research Authority approval for the study (Research Ethics Committee reference 17/HRA/0132) was facilitated by the NHS Integrated Research Approval System (IRAS). Ethical approval was obtained from the NHS Health Research Authority, NatCen Ethics Committee and University of Stirling's NHS, Invasive and Clinical Research Ethics Committee.

6. Results

6.1. Survey results: perceived effectiveness and support for mandatory policies

Flu leads from 72 unique trusts responded to questions about mandatory vaccination polices, representing a 27% response rate from NHS trusts in England ($n = 263$). Over half (54%) of the trusts which responded to the survey were classified as Acute ($n = 39$), with the remainder classified as Mental Health (31%, $n = 22$), Community (8%, $n = 6$) and Ambulance (7%, $n = 5$). The distribution of trust type which responded is similar to that across England in the 2016/2017 influenza season [5].

Over two thirds of flu leads (68%) perceived that mandatory vaccination would be an effective policy to increase uptake, less than half (46%) thought that declination forms would be effective, and under a third (29%) considered face masks (or reduced patient contact) to be effective (Table 2). Less than one fifth (17%) of respondents thought that HCWs would support mandatory vaccination and less than a tenth (8%) thought that HCWs would support face masks or reduced patient contact. Greater support was perceived for declination forms, with around half (44%) perceiving that staff would support this intervention.

7. Qualitative interview findings

The sample achieved across the four study trusts comprised 24 implementers (e.g. flu leads and other managers) and 32 HCWs, of whom 13 had either never had the vaccine, did not routinely have the vaccine or used to have the vaccine in the past but not recently. The remainder regularly had the vaccine.

Table 2
Perceived effectiveness of, and HCW support for, mandatory influenza vaccination policies.

	Perceived that policy would be effective	Perceived that HCWs would support policy
Intervention strategy	%	%
Declination forms	46	44
Face masks or reduced patient contact	29	8
Mandatory vaccination	68	17

7.1. Declination forms

There were mixed views among implementers and HCWs regarding the potential effectiveness of declination forms. While a few participants thought that the desire to avoid form-filling might prompt some undecided HCWs simply to have the vaccine, a more commonly held view was that forms would have no effect on those who were strongly opposed to influenza vaccination:

> *"The member of staff who doesn't have it, that is her decision, she's never had one. . .. I don't think she'll be swayed one way or the other.*" (HCW, Trust A)

Views on the acceptability of declination forms were similarly varied. For some HCWs, the idea was unproblematic and viewed as a "*completely reasonable*" (HCW, Trust B) response, but among others, including both HCWs who had chosen to have the vaccine and those who had not, there was distaste for what was perceived as "*picking out*" staff who "*may have a very valid reason*" (HCW, Trust C) for not being vaccinated. Rather than being viewed simply as an administrative process for gathering data, it was felt to have the potential to be coercive: "*it's an arm behind the back approach*" (HCW, Trust B). Questions and concerns were raised by implementers around how the signing of forms would be enforced and how truthful any information gathered would be regarding reasons for non-vaccination. HCWs wondered what the consequences would be if, having signed a declination form, they themselves or their patients subsequently developed flu: "*Are they going to use it against us? Are they going to point the finger?*" (HCW, Trust A). An implementer in one Trust which had attempted to use declination forms noted that some HCWs refused to sign them for this reason.

However, there was some support for using such forms to gather intelligence on HCWs' motives for non-vaccination. For some respondents with a line management role this was seen as a potentially more valid exercise than simply recording non-vaccinated staff, and it was suggested that the process of administering such forms could facilitate a supportive "*one-to-one discussion*" (HCW, Trust A) which could allow staff concerns about vaccination to be identified and potentially allayed. It was also suggested that such a process could both protect HCWs who chose not to be vaccinated from subsequent pressure and also help managers to differentiate between HCWs who would be unlikely ever to accept the vaccination and those who might be more open to persuasion in future:

> *"Actually it makes the conversation much easier, with colleagues to say 'oh I've signed my declination form', and then I suppose the trust has an accurate record of those that have proactively declined, those that are sitting on the fence that are probably your target group. . . You know you can then target the right people.*" (HCW, Trust B)

Others suggested that if declination forms were to be used in an intelligence-gathering context, to understand reasons for non-vaccination rather than as a means of identifying non-vaccinated staff, then they could just as legitimately be completed anonymously.

7.2. Face masks

There was little support across the sample for mandatory face masks for non-vaccinated HCWs. The few comments in favour included that the measure would underline the importance of vaccination and might "*embarrass*" (HCW, Trust B) non-vaccinated staff into changing their stance, and acknowledgement that staff did wear masks in other contexts, so the idea was not unprecedented. Against these minority views were objections on a number of grounds, centring on themes of unenforceability, ineffectiveness, illogicality, stigma and detriment to patients.

Implementers generally felt that the measure would not be enforceable: firstly, because managers would need access to occupational health records to identify which staff should wear masks (which was not permitted), and secondly, because HCWs would simply refuse. It was felt by many that, even if these barriers were overcome, face masks would be ineffective as a means of reducing potential infection. Participants queried what kinds of masks would be required, in what contexts and for how long during the influenza season; expressed scepticism that the masks would be of sufficient quality to protect against infection; and speculated that masks could actually increase problems by harbouring "*more bugs*" (HCW, Trust C) or through weakening adherence to other infection control practices:

> *"I don't see the evidence base to support it . . .If somebody's wearing a mask all day, for instance, or hands on - taking a mask on and off all the time, they're not then going to be washing their hands and paying attention to general infection control practices because you're putting a barrier in the way - I think you create more problems than you could actually solve.*" (HCW, Trust C)
>
> *"That's a very expensive thing to do - PPE masks which work properly to block things out are not cheap. You need to change them regularly. . . ..I'm not sure that it's worthwhile.*" (HCW, Trust D)

There were further objections on the grounds of illogicality. For some participants, the underlying rationale - that face masks substituted for the protection conferred by the vaccine – was flawed because the seasonal vaccination was not itself of proven effectiveness. Given this, the logical position would be "*to put masks on everybody*" (HCW, Trust C) regardless of vaccination status, an option which was felt to be unfeasible and undesirable. One respondent offered in illustration a hypothetical example in which an HCW carrying infectious bacteria could work unmasked because they had been vaccinated, while another who was healthy would have to wear a mask because they had declined vaccination.

In addition to these concerns about enforceability and effectiveness, participants raised objections that making non-vaccinated HCWs wear masks would be "*stigmatising*" (Implementer, Trust B) and "*discriminatory*" (HCW, Trust C). These views were strongly expressed by HCWs who had not been vaccinated, but were also shared by others who had. There was distaste for "*segregating*" (HCW, Trust D) HCWs for a choice which they were perfectly entitled to make, and particularly if there was a medical reason that a HCW could not have the vaccination:

> *"[Someone] might've decided not to have the vaccine because they're allergic to eggs, for example. It's not because they've chosen not to have the vaccine; it's because they can't have the vaccine. So I think that, that's quite difficult because you're highlighting people by distinguishing them from everyone else.*" (HCW, Trust D)

Finally, objections were voiced regarding the potential impact on patients. The view was expressed that although staff face masks were ostensibly intended to protect both staff and patients and reduce infection, they could paradoxically harm patients by causing distress and by raising the possibility that the patient's own infectious status was causing staff to deliver sub-optimal care:

> *"I think the patients might panic, 'why are they wearing a mask', they might think it is something they could pass on to us.*" (HCW, Trust B)
>
> *"They'd think that something was wrong, wouldn't they. . . they might even think that they are not being treated how they would be because [the HCW] is scared of catching whatever they have got, and that's not fair.*" (HCW, Trust B)

Regardless of their perceived effectiveness in terms of infection control, there was a consistent view that masks should have no place in regular contacts between healthcare staff and patients because they *"[went] against the care aspect of what we do*" (HCW, Trust B), undermined trust, and hindered communication. This was felt to be a particular risk with patients who had communication difficulties or were confused:

> *"I do think that would have an impact on - on the psychological well-being of the patient 'cause it would make you feel very - well, very upset.*" (HCW, Trust C)

7.3. Mandatory vaccination

There was fairly consistent opposition to the idea of mandatory vaccination across the sample of participants, focusing primarily on the principle of respecting individual choice and the ethics of forcing people to be vaccinated against their will. Participants could not relate to, and strongly resisted, the idea of removed choice, associating it with authoritarian and undemocratic regimes: *"We live in a democratic society. We make our choices and then we live with the choices we make*" (HCW, Trust C); *"I just don't like it at all. . ..It feels very dictatorial and very Big Brother-ish*" (HCW, Trust B). One commented that mandatory vaccination would constitute *"the point at which we stop being employees and start being, you know, indentured servants*" (HCW, Trust D).

It was suggested that compulsory vaccination would not only constitute a breach of HCWs' individual autonomy, but could also give rise to unethical practices such as falsification of records. One view was that it would lead to a *"semi-black market*" (HCW, Trust D) in which those in charge of recording vaccination status could be influenced into recording non-vaccinated staff as vaccinated, which in itself could be *"more dangerous than just knowing that some people aren't vaccinated*" (HCW, Trust D).

Even among those who usually had the vaccination, or who encouraged staff whom they line-managed to have the vaccination, it was felt that the choice not to be vaccinated had to be respected. Several noted that just as patients could and should not be compelled to accept treatment without consent, even if that treatment was advised, the same principle should apply to healthcare staff:

> *"We don't force patients to have treatment; they might make the wrong decision, they might make the wrong choice, but we can't force them to do it.*" (HCW, Trust C)

> *"Somebody could have a very good legal challenge and say, 'Actually, you're infringing my human rights by forcing me to have a drug that I don't want to have', so I don't think it could be enforceable.*" (Implementer, Trust D)

It was argued that mandatory vaccination could antagonise even those who currently favoured vaccination, creating *"absolute uproar*" (HCW, Trust C). This view was backed up by the experience of one participant who had previously worked in an organisation which had attempted to introduce such a policy, with disciplinary consequences for non-compliant staff.

Only a few arguments were put forward in support of mandatory vaccination. It was noted that hepatitis B and other vaccinations were a requirement for working in the NHS and that influenza vaccination could potentially be included in this requirement as a condition of employment: *"You get your hep Bs and all that, your jabs [vaccinations], for your own protection. . .It's beneficial. I think it should be compulsory for workers in the NHS.*" (HCW, Trust A). One participant supported mandatory vaccination, on the grounds that it would reduce the risk of infection, thereby reducing the burden which illness-related staff absences placed on other staff. A few others expressed tentative support alongside uncertainty regarding the extent to which medical exemptions would be permitted, and potential inequity across the NHS workforce if mandatory vaccination applied in some trusts or professional groups but not others. Caveats were also added regarding the need for mandatory vaccination to be negotiated and agreed with workplace unions before being incorporated into employment contracts.

8. Discussion

Overall, responses to the mandatory policies we examined were varied, but largely negative. The survey results showed that although there were varying views on the effectiveness of the policies, none of the interventions were thought likely to be strongly supported by HCWs, with particularly low levels of support perceived for mandatory vaccination and face masks (or reduced patient contact). The qualitative interviews revealed substantial concerns around the practicability and enforceability of the mandatory policies and the potential discriminatory effect on HCWs who made a principled decision or had medical reasons for exemption. The idea of face masks elicited additional concerns regarding the efficacy of masks to protect unvaccinated HCWs and patients, and around the potential anxiety and distress which would be caused to patients.

Regarding mandatory vaccination, there were further objections on the ground that it was unethical to compel HCWs to accept medical intervention. Ethical arguments have been made that mandatory influenza vaccination is justified on the grounds that the potential benefit to patient safety, duty of care and obligation to set a good example outweigh HCWs' own concerns, beliefs and autonomy [12,17,22,23]. Similar arguments have been made in the context of other vaccine-preventable diseases such as measles [24]. However, in our study, resistance to being compelled to have the influenza vaccination tended to over-ride these arguments. Previous studies in a range of countries have tended to find similarly low levels of support among HCWs for mandatory influenza vaccination [20,25], although the measure may be more acceptable if made clear as an initial condition of employment [14] and if philosophical objections are permitted [11]. Legal challenges have been raised by HCWs in some parts of the USA, on the basis that mandatory vaccination is a violation of employment contracts [7,11]. Other objections have been raised on the grounds of undermining personal autonomy, coercion, and damage to staff morale [7,11,23], and that the resources involved in enforcing mandatory vaccination may not be justified [26].

A recent study conducted with HCWs in the UK found that several HCWs opposed the idea of influenza vaccination being compulsory despite having no concerns about being required to be vaccination against hepatitis B [27]. This highlights that HCWs' views on the importance and acceptability of vaccination can vary by disease [28,29], as can support for mandatory vaccination [21,30,31]. These disease-specific differences appear to reflect differences in the perceived severity of the diseases concerned and perceived level of personal risk [28,32]. HCWs may be more likely to accept mandatory vaccination for hepatitis B than for influenza because the disease is perceived as more serious and because they are more likely to feel that the benefits of vaccination outweigh the perceived risks and inconvenience [29]. This suggests that perceptions of vaccine efficacy may be related to support or opposition regarding mandatory vaccination. Several participants in our study commented on the variable effectiveness of the influenza vaccination. It has been argued that because the relationship between HCW vaccination and rates of patient influenza is not conclusive, mandatory vaccination with penalties for non-vaccination cannot be justified [19,20,33].

There has been recent debate about the option of mandatory influenza vaccination in the NHS in England [34,35]. However,

some commentators maintain that a mandatory approach is undesirable, and that improvements in influenza vaccination uptake will only be achieved through strong clinical leadership and wider action to improve morale and working conditions for staff [36,37]. Other research in the UK points to an ongoing need to improve access to the vaccine and to address staff concerns (such as the belief that the vaccine would make them unwell) [9]. That uptake can be increased through effective implementation and engagement with staff is further supported by the strategy of NHS Employers, who cite seven key benchmarks to achieving good vaccination uptake. Our wider study suggests that trusts which have achieved higher vaccination uptake are more likely to have a comprehensive implementation programme [6], with multiple elements: a broad range of staff; ensuring the vaccine is accessible; providing effective communication; offering incentives to be vaccinated; and support from management across the organisation.

Of the three mandatory approaches explored, declination forms elicited fewer negative responses. However, less than half of survey respondents thought that they would be effective or supported by HCWs, and this ambivalence was also reflected in the qualitative interview findings. In June 2017, the UK National Institute for Health and Care Excellence included a declination policy for frontline health and social care staff who do not take up the offer of vaccination as a potential intervention option in its consultation on strategies for increasing uptake [38]. Declination forms have been found in other studies to increase vaccination uptake by between 17% and 24% [7]. However, as they tend to be introduced alongside other strategies such as increased communication, financial incentives for managers, improved access, or changes in the implementation team, their specific contribution to any improvement in uptake is unclear [10,11,19]. This suggests that it may be difficult to quantify their impact on uptake, and consideration could be given in future research to designing experimental studies capable of capturing the specific impact of declination forms on uptake.

The manner and context in which mandatory approaches are used, if they are adopted on a widespread basis by NHS trusts, are likely to be key factors in building support and cooperation among HCWs [14]. Respondents who took part in the qualitative interviews in our study expressed concerns about declination forms being used in a coercive manner, about the potential discriminatory effect of being made to sign declination forms, and whether healthcare workers who signed them would face any negative consequences. This suggests that forms would need to be administered sensitively and with appropriate reassurances. More positively, some respondents did feel that declination forms had the potential to provide trusts with insight into the reasons why staff chose not to be vaccinated, information which could then be used to improve communications and target campaigns more strategically. Any use of declination forms would need to be sufficiently resourced, to be used in a way which does not negatively affect the employee-employer relationship, and with clarity regarding the potential consequences of signing the form [39].

The study had a number of limitations. The survey findings are based on a relatively small sample of NHS Trusts, and the response rate is lower than a previous survey exploring influenza vaccination uptake in NHS trusts [40]. Although the sample was not at large as anticipated, it included 39 acute, 22 mental health, 6 community, and 5 ambulance trusts (no area teams responded to the survey, although they only represent 10% of NHS Trusts in England). Further, responding trusts did not significantly differ from non-responding trusts on the mean number of HCWs involved in direct patient care, number of seasonal influenza doses given since 1st September 2016, influenza vaccine uptake in 2016/2017, or change in influenza vaccination uptake from 2015/2016 [6]. We only analysed perceived effectiveness and perceived HCW support across all responding trusts, and did not analyse how this differed between types of trust (e.g. acute vs. mental health) or trusts with varied level of uptake. Moreover, some trusts had multiple flu leads and it is possible that in selecting only one response per trust, some views were under-represented, although the selection process was random. For the qualitative interviews, we negotiated access to managers and HCWs via flu leads which may have introduced bias into the sample, although flu leads were specifically briefed to promote the study to a wide range of staff groups operating across the full range of health settings. Participants who consented to participate may have been motivated by having particularly strong views (either negative or positive) on the influenza vaccine, meaning that the views of those with less strongly held or ambivalent views may have been under-represented. In addition, the small sample size meant it was not possible to make comparisons between different groups of HCWs, who for example had different levels of contact with patients both overall and in terms of vulnerability. Larger scale studies are required to examine whether HCWs' views vary by type and level of patient contact and vaccination status.

9. Conclusion

There is little support among managers and HCWs in the NHS in England for compulsory influenza vaccination or for non-vaccinated HCWs to be required to wear face masks. Views on the likely effectiveness and acceptability of declination forms are less negative, but concerns remain. If adopted as a measure to increase influenza vaccination uptake, the manner and context in which declination forms are used are likely to be key factors in their effectiveness.

Conflict of interest

The authors declare no conflicts of interest.

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