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POLICY BRIEF

Increasing influenza vaccination rates among healthcare workers by focusing on workplace and patient safety

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Abstract

Context: In 2014, the influenza vaccine uptake in Europe was below 35% among healthcare workers (HCWs). Due to a lack of confidence in vaccination as a result of safety concerns, HCWs increasingly do not take the influenza vaccine. Consequently, there is a rising influenza burden which results in increasing mortality of vulnerable patients and absenteeism in hospitals. This policy brief aims to increase the awareness of HCWs regarding the importance of influenza vaccination uptake, which may result in improved patient and workplace safety.

Policy Options: To increase vaccination coverage and reduce vaccine hesitancy among HCWs, a change in attitude towards and knowledge about the influenza vaccine is needed. Two potential approaches are presented in this paper. Firstly, a mandatory vaccination policy is discussed. Practical and ethical challenges of implementing a mandatory vaccination policy are considered. Secondly, information campaigns are described, consisting of three pillars: safety, information, and knowledge.

Recommendations: It is recommended to initiate information campaigns focussing on patient safety. Furthermore, a structural approach to increase access to vaccination at the workplace must be taken. Higher vaccination rates of HCWs lead to an improved workplace safety. The recommended information campaign can also be used for other vaccine preventable diseases or in other situations, such as HCWs vaccine hesitancy regarding COVID-19 vaccines. Lessons from the COVID-19 pandemic regarding acceptance of vaccines should be considered for the improvement of future influenza vaccine uptake.

Keywords: *Healthcare workers, information campaign, influenza vaccination, mandatory vaccination, vaccine hesitancy*

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Introduction

Influenza is an annual public health concern [1]. The World Health Organization (WHO) estimates that seasonal influenza annually infects 5% to 15% of the global population, with 3–5 million cases of severe illness and up to half a million deaths [2].

Infected healthcare workers (HCWs) are the major cause of hospital-acquired influenza cases [2], since asymptomatic infection cases may still transmit the influenza virus to vulnerable patients [3]. The hospital-acquired cases constitute particularly high mortality, with an estimated median of 60% in high-risk groups, such as patients aged over 65 years, patients with chronic diseases, and intensive care unit patients [1, 2]. Accordingly, a significant proportion of the burden of this disease is vaccine-preventable [2].

The WHO, the Centers for Disease Control and Prevention (CDC and ECDC), and the Public Health Institutes strongly recommend that all HCWs take annual influenza vaccination [1, 4], taking up the principles of beneficence and non-maleficence [2]. Studies found that immunizing HCWs against influenza each year decreases mortality in influenza cases [5]. However, influenza vaccine uptake among HCWs remains low in European countries. In 2014, for the 10 European Union (EU) countries that could provide data on HCW vaccination rates, the vaccine uptake reported was less than 35% [1].

Context

HCWs are considered the most trusted source of vaccine-related information. However, studies are showing that they are losing confidence in vaccination for their children, themselves, or their patients. In other words, despite the effectiveness and safety of vaccinations being well documented [6-8], the

vaccine hesitancy among HCWs is increasing and affecting others as well. The SAGE Working Group on Vaccine Hesitancy defined “vaccine hesitancy” as “a behavior, influenced by a number of factors including issues of confidence, complacency, and convenience” [8]. Vaccine hesitant HCWs can have a forceful influence on vaccination decisions. They might recommend vaccines less frequently to their patients, or otherwise undermine confidence and contribute to vaccine hesitancy among the general population. This is a particular concern given the benefits associated with influenza vaccination in high-risk groups [5]. HCWs have their patients’ health at heart, and they must be reminded of the dangers of vaccine-preventable diseases and the low risks of vaccine side effects [9]. Influenza infection in HCWs is also a major reason for absenteeism in the hospital during winter, increasing the influenza burden [1]. This shows the importance of encouraging the vaccine hesitant HCWs who do not actively care for their own health to take the influenza vaccine.

Research into vaccine hesitancy and its reasons among HCWs showed generally high levels of trust and confidence in vaccination [9]. However, there were concerns about safety, questions about the need for vaccines, and/or mistrust in pharmaceutical companies. The most important concern was the fear of vaccine side effects. Furthermore, there was strong mistrust in pharmaceutical companies due to perceived financial interests and a lack of communication about side effects. It was also shown that HCWs present a lack of confidence in the need for and the effectiveness of some vaccines, particularly the seasonal influenza vaccine. A few doctors demonstrated being entirely against vaccination and decided not to recommend it to their patients, which constitutes a particular concern on HCWs influence on vaccination intentions.



Another important concern for HCWs related to influenza vaccination was trust. In France, eight out of ten general practitioners (GP) trust the Ministry of Health, but 50% of them also believe that the Ministry is influenced by pharmaceutical companies [9]. Hence, this group of vaccine hesitant HCWs require specific persuasion to increase their uptake of the influenza vaccine. Recently, the COVID-19 vaccines were approved, and the vaccination campaigns have started. Throughout the European Union Member States, acceptance of the new COVID-19 vaccines differs. It is claimed that high acceptance of COVID-19 vaccines is linked to the availability and active share of information to HCWs from national public health authorities [10]. Nonetheless, concerns among HCWs on the safety and effectiveness of the COVID-19 vaccines show similarity to the debate on influenza vaccine hesitancy [11]. Leadership coalition tactics can be applied to get the support of other parties to assist in influencing the target [12]. A stakeholder that is involved in the problem of vaccine hesitancy among HCWs and tries to address this issue is the Coalition for Vaccination. In 2019, the Coalition was convened by the European Commission, bringing together European associations of HCWs and relevant student associations in the field. The Coalition aims to support delivering accurate information to the public, combating myths around vaccines, and exchanging best practices on vaccination. The purpose of this policy brief is to increase the awareness of the Coalition for Vaccination on HCWs' concerns that contribute to vaccine hesitancy and how to prevent and respond to vaccine hesitancy among HCW using a workplace and patient safety approach.

Policy Options

Information campaigns

Since vaccination coverage among HCWs is insufficient and vaccine hesitancy is on the rise, there is a need for change in the attitude of HCWs towards the influenza vaccination. To achieve the latter, more collaboration between stakeholders in this field is needed. An efficient way to combat vaccine-hesitant HCWs is through information campaigns. These vaccine awareness campaigns can be based on three different pillars, namely safety, knowledge and trust.

Safety

Higher vaccination coverage among HCWs can lead to a higher level of safety and protection, both to the patients, who are vulnerable individuals visiting the healthcare facility, and the workplace, including the healthcare staff themselves. HCWs have their best intentions when it comes to their patients' safety, which is why it is necessary to remind them of the dangers of vaccine-preventable diseases and the low risks of vaccines. HCWs are responsible for the health and safety of their patients, which can be safeguarded through vaccination. Some HCWs feel responsible for potential side effects, but the benefits of the influenza vaccine are higher than the potential risks, and HCWs should be aware of that [9]. Additionally, vaccination contributes to workplace safety. Not only are HCWs responsible for the health and safety of their patients, but they can also protect their patients by making sure that they are vaccinated against influenza themselves to prevent infecting patients or other hospital staff [13]. Moreover, the vaccination of HCWs poses a major benefit to the hospitals and healthcare staff. It reduces costs by decreasing absence due to illness and improves health and morale among the HCWs themselves, creating a stronger and more united team [14]. Communication about safety could be implemented as an initiative from

hospitals or other healthcare entities. They could provide training sessions or courses for their staff regarding the safety of vaccines. Supplying them with free influenza vaccination on an accessible location would also be beneficial.

Knowledge

Compared to the safety approach, the knowledge approach frames the appeal to the HCWs in a different way. As a result of these training sessions on workplace and patient safety, awareness and knowledge on influenza vaccines are increased. Awareness and knowledge of HCWs on this subject increases their willingness to recommend vaccination to their patients. Moreover, HCWs who are more knowledgeable about the subject are also more likely to get vaccinated themselves [13]. More knowledge of vaccines can be provided by the healthcare institutes through HCWs training and information campaigns. Subsequently, this knowledge can be passed on between colleagues. A study by Duval et al. (2009) found social and collegial support to be important contributors to the confidence of HCWs in advising patients about vaccination [15]. Lack of knowledge is not homogeneous among HCWs. For instance, the head of a department might be more educated in the field of vaccination than an intern or a nurse [16]. As heads of department are responsible for the health and safety of their employees, they need to take a more active leadership role in promoting influenza vaccination among HCWs. Furthermore, collegial support and targeted training might be beneficial for improving knowledge and awareness in all healthcare staff.

Trust

Another important factor for vaccine hesitancy is (lack of) trust. Although HCWs trust policymakers, their level of trust towards

pharmaceutical companies is considerably lower [9]. Some HCWs even believe that authorities are influenced by pharmaceutical companies, or that pharmaceutical companies withhold information as a form of power control [17]. HCWs are not only influenced by their direct environment, but by a wide scale of socio-economic, political, and cultural contexts on concerns about vaccines [9]. Therefore, there is a need to bridge the gap between these different contexts. To achieve this and build trust and confidence, a high degree of transparency and information sharing between the various fields is necessary. To do so, news and media outlets should be used in a positive way to send a message to HCWs and different stakeholders. The power of the media can be used to benefit healthcare entities on an organizational, clinical, and patient level and is crucial for the implementation of new policies [18]. In 2020, the Coalition has been conducting an advocacy campaign to promote the uptake of vaccines among HCWs and their patients, aiming to remind that immunization through vaccination is the best protection there is against serious, even deadly, preventable diseases [19].

Mandatory vaccination

An alternative policy to increase influenza vaccination uptake in HCWs is mandatory vaccination. Mandatory vaccination is defined as requiring individuals to receive at least one vaccination to access a service or be employable, with penalties in case of non-compliance (20).

Policies regarding the introduction of mandatory vaccinations for HCWs are seen as controversial in Europe and met with strong resistance by working unions [21]. Vaccination hesitancy results from concerns on the effectiveness and safety of vaccines, combined with other contextual influences like religious beliefs [22]. However, when it comes to mandatory vaccinations for HCWs, it

seems that the debate revolves around ethical issues more than practical ones [23]. Given the difficulties related to the implementation of mandatory vaccinations among HCWs and the main benefits of the procedure stemming from the protection of vulnerable patients [23], mandatory vaccination policy, in Europe, is largely reserved to HCWs which operate in elderly homes or high-risk hospital wards where they are constantly in close contact with vulnerable patients.

This collective of vulnerable individuals includes people that are immunocompromised, immunosuppressed or have other medical conditions that result in seasonal influenza becoming a sizable threat to their health [24]. Mandatory vaccination policies are not common in Europe. However, in the United States, these policies have already been implemented in hospitals and other medical entities with success since 2004 [25]. Indeed, the vaccination rates among HCWs were low before the policy implementation [26]. The mandatory vaccination policy achieved coverage of 98% among 5000 employees [27]. However, this applied in private settings which are not that common in Europe, which makes the transferability of the policy to the European territory difficult [28]. Moreover, trying to implement mandatory vaccination in Europe may be perceived as a coercive power that would undermine its effects.

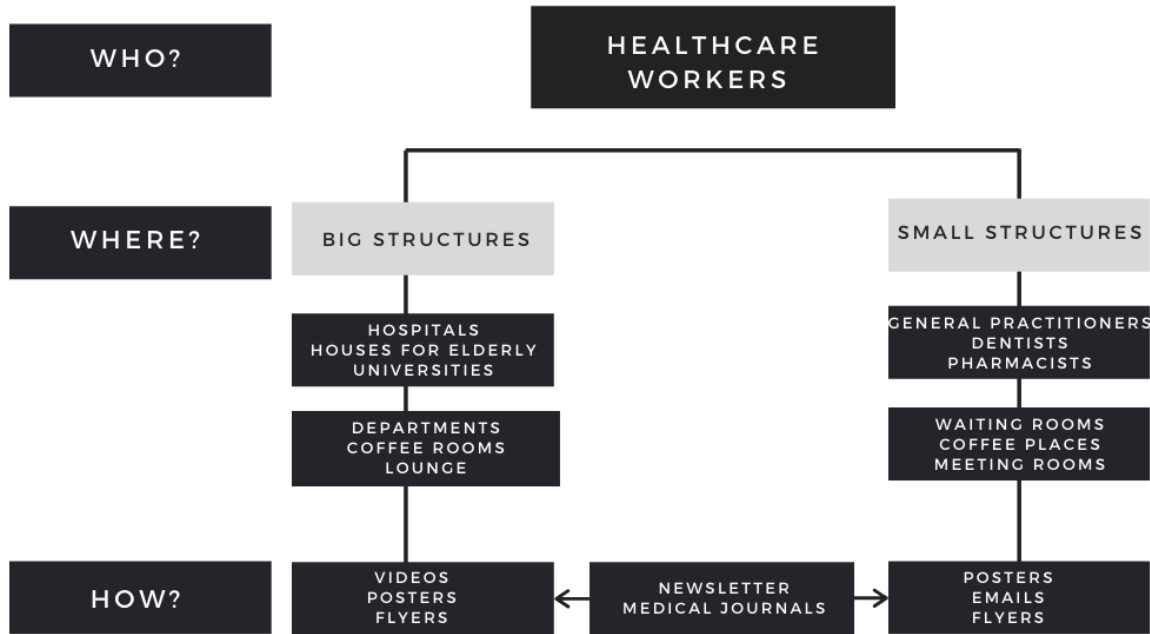
Recommendations

The purpose of this policy brief is to encourage the Coalition for Vaccination to prolong their work on vaccine hesitancy among HCWs. To respond to the latter, it is advised to implement an information campaign on workplace and patient safety. To do so, several aspects need to be considered. Creating a sense of urgency for the improvement of influenza vaccination uptake is essential.

Based on the considered policy options above, it is recommended to implement the campaign focusing on the safety pillar. Mandatory vaccination was excluded from the implementation process as it can be seen as a coercive power, which creates a negative connotation. Furthermore, targeting the campaign specifically on trust or knowledge needs to be tailored to specific environments, whereas the safety pillar will have a broader effect on all HCWs. Focusing on safety will strike the most result in the first stage of the information campaign because HCWs have their patient's health at heart. They take an oath when becoming a doctor and swear that they will care for the sick, promote good health and alleviate pain and suffering [29]. Hence, appealing to the area of safety will gain the most result in improving vaccination rates. It is essential to address patient safety, as well as workplace safety, when implementing the information campaign. Addressing patient safety underlines the HCWs awareness of their obligation to promote good health. When HCWs decide to take the influenza vaccine, their positive stance towards the vaccine might spill over to their patients. A patient usually trusts the doctor and, therefore, relies on the doctor's opinion on the necessity to receive the influenza vaccine. Additionally, it is important to focus on workplace safety and the protection of colleagues. HCWs who have influenza with only minor symptoms might still infect colleagues which could lead to an increase in absenteeism. The best timing for initiation of the information campaign on influenza vaccination is in September and October, just before the start of the vaccination program. This timing appeals to a sense of urgency and concern for the professionals as the influenza season will be around the corner. It is essential to differentiate between big and small healthcare entities during the implementation of the infor-

-mation campaign (Figure 1).

Figure 1. Approach for spreading the information campaign



The campaigns in the big structures, such as hospitals, should be driven by employers. Practically, it is recommended to perform small information campaigns inside the buildings and hence have a campaign closer to the professionals. Videos or posters can be presented in departments, waiting rooms or coffee places to encourage the discussion between people on influenza vaccination and safety. Universities also need to be targeted and medical students are encouraged to spread the campaign to their teachers during their practical internships. Furthermore, flyers are provided with a more extensive explanation of the problem on low influenza vaccine uptake and reasons why HCWs should become vaccinated. In the small structures, the information campaign targets HCWs such as general practitioners, dentists or pharmacists.

Here, the campaign relies mostly on giving these HCWs access to the information in different ways such as providing them with posters and flyers. Furthermore, the information campaign will spread further when medical students are doing internships at smaller practices. In addition to the information campaigns in big and small structures, it is important to take a structural approach to increase influenza vaccine uptake amongst HCWs. This means that, for example, time slots for vaccination should be organized in the workplace as often as possible to facilitate access to the vaccine. To increase the visibility of the information campaign, the national and local members of the institutions taking part in the Coalition for Vaccination are encouraged to develop partnerships with, for example, medical journals to further spread the.

Indeed, the reading of medical papers is part of the daily practice of HCWs. Therefore, it creates awareness of the problem of low vaccination uptake and the reasons why HCW should become vaccinated. This might encourage non-vaccinated HCWs to get the influenza vaccine. The members of the Coalition for Vaccination are encouraged to spread the information as much as possible throughout the countries of their members, by the newsletter for example, and to provide it in the national languages. It is important to plan the time to translate the information in different languages before the start of the campaign. A reference to the English version of the campaign should also be kept available for people who want to check out the official source and to prevent misunderstandings due to the translation. Regarding the financing of the campaign, funds are to be requested from the European Union. National Health Institutes or Organizations are also encouraged to take part in the funding. Furthermore, the Coalition for Vaccination is asked to help spread the campaign by all means amongst its members and contribute financially if possible. Finally, the big and small structures such as hospitals and general practitioners might contribute according to their available capacities.

Conclusion

It is advised to combine a structural and holistic approach in the implementation of information campaigns to address vaccine hesitant HCWs. Although the main focal point of the information campaign must be patient safety, workplace safety should not be disregarded. Furthermore, a structural approach is to be taken to increase access to vaccination at the workplace. The recommended information campaign to address vaccine hesitancy among HCWs not only applies to the

influenza vaccine but can also be implemented for other vaccine preventable diseases or in other situations. Decreasing, for example, the number of vaccine hesitant HCWs in the current COVID-19 pandemic can be achieved by creating more awareness of HCWs' patient- and workplace safety. Hence, they can be persuaded or encouraged to become vaccinated.

Lessons from the COVID-19 pandemic regarding the acceptance and the uptake of the vaccine should also be taken into account for the influenza vaccine.

Addressing HCWs by referring to their patients' safety, as well as their own safety, influences their role as leaders in an emotionally intelligent process. By combining these approaches, it is aimed to create more debate on vaccine hesitancy, and it is expected to result in a positive change in HCWs' attitudes towards vaccination.

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