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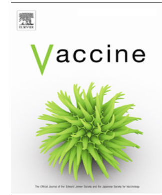

Commentary

How health workers can make a difference in the public COVID-19 vaccination response

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Vaccination acceptance is affected by the behaviours of health workers (HW), including how they communicate about and recommend the vaccines, which again is affected by how they are supported (physically and mentally) in this effort [1] and whether they are vaccinated themselves [2]. Ensuring successful public responses to COVID-19 vaccination warrants particular attention, prioritization, investment in HWs, and evidence-informed considerations.

Employing a key WHO criterion for transitions in the pandemic response (Fig. 1), we propose ten considerations to support governments, health authorities and those within health and aged care settings to enhance their engagement with HW around the COVID-19 vaccination program (Table 1). These considerations were informed by a review of the relevant literature, focused on the factors that promote HW vaccine readiness and the issues identified during the pandemic regarding promoting COVID vaccination to patients. Insights were also captured through qualitative and quantitative studies with HW undertaken across seven countries in the WHO European Region during the COVID pandemic (unpublished) and via consultations and workshops with national immunisation policy/program makers and implementers.

1. Consideration 1: Care for health workers

During this pandemic, HW have been at the forefront, with many experiencing immense workload stress and the risk of infection or severe outcomes from COVID-19 for themselves and their families. Now they are engaged in an extraordinary effort to vaccinate entire populations. In unpublished studies in the WHO European Region, some HW have felt insufficiently supported during the pandemic, e.g., reports of inadequate protection equipment, information, guidelines, and training. This may affect their motivation and emotional capacity to acquire new skills related to COVID-19 vaccination and apply these in practice [2]. This calls for consideration and support from the health system and managers at all levels, taking care of HW's mental health and supporting their emotional and psychological needs.

2. Consideration 2: Listen to health workers

With constant new evidence related to COVID-19 vaccination, the barriers, and drivers (structural, social, personal) impacting HW delivering the COVID-19 vaccination program may change over time. This highlights the need for insights into the local context and listening to HW. Significant differences between countries have been documented [1], and acceptance of specific policies, messages or interventions related to COVID-19 vaccination differs from one cultural context to another and among different categories of HW. Exploring the barriers and drivers is critical and may involve qualitative and quantitative studies with HW and ongoing monitoring, observation, and feedback mechanisms.

3. Consideration 3: Understand public expectations

Trust in HW is crucial for patients to accept a COVID-19 vaccine recommendation [3–5]. While vaccine information from HW can improve vaccine acceptance and uptake, patients report that the opposite can also be true if they get a sense of judgement and pressure from HW or feel confused, disrespected, or mistrustful [6]. HW must be skilled in discussing vaccination with patients while tailoring their conversations to patients' needs and perceptions. [7]. Regarding COVID-19 vaccination, understanding people's expectations and experiences, their vaccination perceptions and intentions, and their concerns help guide the effort of HW to promote vaccine confidence and acceptance. Such insights can be gained through national behavioral insights surveys, qualitative studies with key population groups, hotlines, media/social media monitoring and more.

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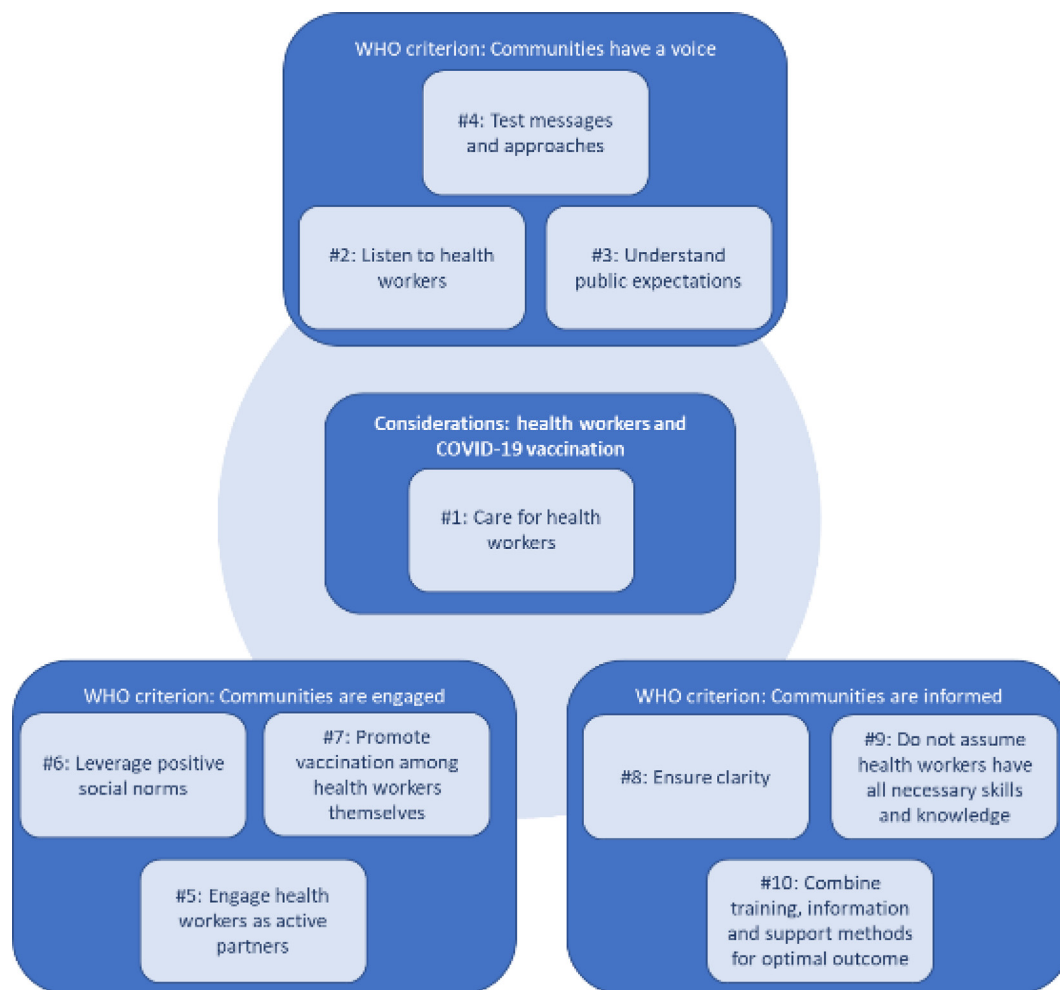

Fig. 1. Ten considerations on health workers and COVID-19 vaccination. *Note:* The considerations substantiate the WHO/Euro principle #6 "Communities have a voice, are informed, engaged and participatory in the transition" and were derived from evidence and expert consultation. The considerations do not imply a temporal sequence and are interrelated just as listening to communities, engaging with them, and informing them are interlinked. The considerations are aimed at providing suggestions to governments. Taking care of health workers regardless of other intervention is in the center of the vaccination roll-out (#1). Giving them a voice (#2–4), engaging them (#5–7), and informing them (#8–10) are other key principles for the vaccination roll-out.

4. Consideration 4: Test approaches and messages

HW should be consulted before developing and implementing any tool, guidance, message, or initiative (targeted at 'supporting the HW') to ensure the acceptability, appropriateness, and potential workload impact of the planned effort. This can be done through engaging HW in a co-creation process and testing materials and messages in focus groups. Invite different categories of HW to reflect on planned messages and information products, either individually, online or in groups. Allow them to speak freely and present them with several options on which they can comment.

5. Consideration 5: Engage health workers as active partners

Research shows that active engagement is needed to affect the behaviors and practices of HW. In contrast, a lack of attention may render more passive interventions – such as written guidance and information – ineffective [8]. This calls for the engagement of HW as active agents and partners who help shape the overall vaccination effort and feel respected and listened to. Engagement can take many direct and indirect forms, depending on the cultural and health systems context. Asking HW for their advice and inviting them to participate in decision-making (and considering their input!) can increase motivation and assure HW that they are valuable to the institution. When staff perceive that they are valued, their sense of affiliation and loyalty towards the organization is increased. For example, HW can be helpful in mapping the frequently asked questions. This may also involve sharing, explaining, and discussing data and targets related to COVID-19 vaccination, aiming to promote awareness of issues and challenges and allow HW to help determine measures of success. Where relevant, all such co-creation processes could seek to include various categories of personnel, both clinical and non-clinical.

6. Consideration 6: Leverage positive social norms

Rather than focusing on those who are hesitant, it is contrastive to highlight the positive majority norm. An essential motivator for recommending vaccines to patients is a sense of duty to promote public health and vaccination [3]. This positive social norm can be promoted through various means, including the joint development of a narrative for why HW in a facility believe vaccination is essential. HW can be engaged as trainers or as vaccine champions for information campaigns targeting their peers or the public. HW can also be encouraged to promote vaccination through their excellent example. Depending on the context, this may be done

Table 1
Ten considerations with action examples. Note: Activities should always be informed by behavioral and contextual insights and tested before launch.

Consideration	Action examples*
Care for health workers	• Ensure support and recognition from management. • Establish mechanisms to improve mental health and well-being. • Provide legal and personal support in case of adverse event.
Listen to health workers	• Conduct studies with health workers. • Establish feedback mechanisms. • Conduct supportive observations or visits at vaccination sites.
Understand public expectations	• Conduct behavioral insights surveys with the public to understand vaccine intentions and perceptions • Monitor media and social media, and establish hotlines for two-way interaction • Establish mechanisms for health workers to report the questions/concerns they hear from people
Test approaches and messages	• Test information materials in focus groups with health workers. • Ask health workers to define which incentives and rewards will be appreciated. • Conduct exercises to test crisis response plans with health workers.
Engage health workers as active partners	• Invite health workers to co-create interventions aimed at health workers. • Form alliances with health worker organizations. • Engage volunteers and retirees to support vaccination effort.
Leverage positive social norms	• Engage health workers as the faces of campaigns. • Conduct peer-to-peer training. • Focus on those who do vaccinate rather than the hesitant.
Promote staff vaccination of health workers themselves	• Make staff vaccination free of cost and available at workplace. • Ensure guidelines recommending occupational vaccination. • Provide information and reminders about staff vaccination.
Ensure clarity	• Check that information is meaningful, culturally sensitive and tailored to the category of health workers receiving them • Provide information which transparently addresses the concerns health workers have • Provide clear and practical information about how, when where vaccination is provided and the role of health workers
Do not assume health workers have all necessary skills, confidence, and knowledge	• Establish mechanism to be accessible and responsive. • Consider needs related to introducing a new vaccination, to evolving evidence and the rapid emergency use approvals. • Consider needs related to vaccination in a new setting and to new vaccinators, or those who have not vaccinated adults before.
Combine training, information, and support methods for optimal outcome	• Train with audit and feedback, interacting with other learners (peer-to-peer) and post education automatic reminders. • Tailor trainings to categories of health workers, testing them for meaningfulness and cultural sensitivity. • Initiate collaborative team-based learning activities.

* Activities should always be informed by behavioral and contextual insights and tested before launch.

by providing badges for HW ("I am vaccinated against COVID-19") or through HW sharing personal stories about their vaccination or others through social media platforms and forums. Such personal and positive stories can help create positive social norms and, at the same time, address misconceptions and strengthen trust and demand for immunisation.

7. Consideration 7: Promote staff vaccination

There is abundant evidence that the vaccination status of the HW affects their recommendations to patients [2,9,10]. Those vaccinated are more likely to see vaccination as a public health good and believe they should recommend the vaccine and provide a reassuring example. In contrast, unvaccinated HW tend to think of this as the patient's choice [2]. Personal protection is usually the primary motivator for the vaccination of HW, coupled with a belief in the safety and efficacy of the vaccine [11,12]. Likewise, peer expectations of vaccination have been associated with HW vaccination uptake [13]. This can be used when shaping messages for HW's own vaccination.

8. Consideration 8: Ensure clarity and transparency

When official information is not available, HW use an alternative, e.g., online, sources to find information about COVID-19 vaccination, as confirmed by unpublished studies in the WHO European Region. Given the complexity of COVID-19 vaccination, the need for easily accessible information is considerable. All forms of communications need to be meaningful, culturally sensitive, language accessible and tailored to the category of HW receiving them [13].

9. Consideration 9: Do not assume healthcare workers have all the necessary skills, confidence, and knowledge

It cannot be assumed that all HW have good knowledge about COVID-19 vaccination or feel confident in recommending it to their patients. Research shows they may lack awareness of national guidelines for routine immunisation and lack detailed knowledge about vaccine efficacy, contraindications, side effects, and good communication practices. They may have concerns about vaccine safety themselves [13]. Even if HW know how vaccines work, research from many different places around the globe, and experience from previous pandemics, show that a critical barrier to vaccination is safety concerns, such as the vaccine itself causing the disease and fears about potential side-effects. This concern was even stronger for COVID-19 vaccines as they have been developed in record time. Some HW also expresses misconceptions about vaccine efficacy and the consequences of the diseases they prevent. This has been confirmed for the COVID-19 vaccination as well.

Recent unpublished studies with health workers in the WHO European Region indicate that in some places, HW have many concerns about COVID-19 vaccine safety and asks for evidence from other countries that the new COVID-19 vaccines are safe and effective. Studies show they may not feel confident answering questions or engaging in difficult conversations about vaccination even when they are well informed and supportive of vaccination. High-quality training, including tailored to the introduction of specific vaccines, is needed to boost vaccine confidence and practice communication skills.

There have been videos posted on social media, YouTube and TikTok of individual HW talking about the COVID vaccines. The videos often contain misinformation about the safety or effectiveness of the vaccines or include the HW expressing uncertainty about the rational. This is concerning as they leverage the credibility of medical professionals to create this inappropriate impression about the safety of the COVID-19 vaccines. In some settings, the spread of unscientific information can be construed as a right to free speech. However they cannot present the sentiments as a professional speech [14]. Work in this area is needed, including how to support hospitals and professional medical societies and specialty boards around how to first engage with these staff and when discipline or sanctions are needed [15].

10. Consideration 10: Combine training, information, and support methods for optimal outcome

When building HW's knowledge, skills, and confidence, it is essential to note the knowledge-behavior gap [16]. Achieving new knowledge does not automatically lead to a change in behaviors. Passive forms of training such as written guidelines and education materials are less effective if they stand alone and are insufficient to build confidence and skills and change HW behavior. High-quality interactive capacity building is needed to ensure a learning outcome, increased confidence, and translation into practice. Effective approaches include training with audit and feedback, collaborative team-based interventions, interaction with other learners (peer-to-peer) and post-education automatic reminders (i.e., the automated checklist). Training should include practice exercises and learning through observation to improve the translation of new knowledge into action. Training needs to be accessible, meaningful, culturally sensitive and tailored to the category of HW receiving them. Evaluation allows for continuously improving trainings.

11. Conclusion

These considerations result from input from relevant evidence interpreted by experts and implementers from relevant fields; inevitably, their fields of study and lived experiences affected the product. It should also be noted that the considerations described in this paper include evidence from literature that does not relate to a crisis or pandemic situation. The COVID-19 pandemic has posed new challenges to the field of vaccination, with the introduction of multiple new vaccines aimed at entire adult populations and introduced rapidly in a health crisis context. HW everywhere plays a powerful role in the potential success of this massive global effort.

Author contributions

KBH, SN, SMN, MS, CS were responsible for undertaking studies with health workers in the WHO European Region which informed the considerations. HS is an international expert on health worker vaccination and assisted with the framing of the considerations.

Declaration of Competing Interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Dr Holly Seale has previously received funding from drug companies for investigator driven research and consulting fees to present at conferences/workshops and develop resources (Seqirus, GSK and Sanofi Pasteur). She has also participated in advisory board meeting for Sanofi Pasteur. The other author do not have anything to declare.

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Disclaimer

The authors affiliated with the World Health Organization (WHO) are alone responsible for the views expressed in this publication and they do not necessarily represent the decisions or policies of the WHO.

References

[1] Karafillakis E, Dinca I, Apfel F, Cecconi S, Wűrz A, Takacs J, et al. Vaccine hesitancy among healthcare workers in Europe: a qualitative study. Vaccine 2016;34(41):5013–20.
[2] Paterson P, Meurice F, Stanberry LR, Glismann S, Rosenthal SL, Larson HJ. Vaccine hesitancy and healthcare providers. Vaccine 2016;34(52):6700–6.
[3] Yaqub O, Castle-Clarke S, Sevdalis N, Chataway J. Attitudes to vaccination: A critical review. Soc Sci Med 2014;112:1–11.
[4] Reiter PL, Pennell ML, Katz ML. Acceptability of a COVID-19 vaccine among adults in the United States: how many people would get vaccinated? Vaccine 2020;38(42):6500–7.
[5] Lazarus JV, Ratzan SC, Palayew A, Gostin LO, Larson HJ, Rabin K, et al. A global survey of potential acceptance of a COVID-19 vaccine. Nat Med 2021;27(2):225–8.
[6] Leask J, Kinnersley P, Jackson C, Cheater F, Bedford H, Rowles G. Communicating with parents about vaccination: a framework for health professionals. BMC Pediatrics 2012;12:154.
[7] Ames HM, Glenton C, Lewin S. Parents' and informal caregivers' views and experiences of communication about routine childhood vaccination: a synthesis of qualitative evidence. Cochrane Database Syst Rev. 2017;2: Cd011787.
[8] Rowe AK, de Savigny D, Lanata CF, Victora CG. How can we achieve and maintain high-quality performance of health workers in low-resource settings? Lancet 2005;366(9490):1026–35.
[9] Morales KF, Menning L, Lambach P. The faces of influenza vaccine recommendation: A Literature review of the determinants and barriers to health providers' recommendation of influenza vaccine in pregnancy. Vaccine 2020;38(31):4805–15.
[10] Smith S, Sim J, Halcomb E. Nurses' knowledge, attitudes and practices regarding influenza vaccination: an integrative review. J Clin Nurs 2016;25(19-20):2730–44.
[11] Seale H, Kaur R, Wang Q, Yang P, Zhang Y, Wang X, et al. Acceptance of a vaccine against pandemic influenza A (H1N1) virus amongst healthcare workers in Beijing. China Vaccine 2011;29(8):1605–10.
[12] Dubé E, Defay F, Gilca V, Bettinger JA, Sauvageau C, Lavoie F, et al. A(H1N1) pandemic influenza and its prevention by vaccination: Paediatricians' opinions before and after the beginning of the vaccination campaign. BMC Public Health 2011;11(1).
[13] Hollmeyer H, Hayden F, Mounts A, Buchholz U. Review: interventions to increase influenza vaccination among healthcare workers in hospitals. Influenza Other Respi Viruses 2013;7:604–21.
[14] Rubin R. When Physicians Spread Unscientific Information About COVID-19. JAMA 2022;327:904–6.
[15] Sage WM, Yang YT. Reducing "COVID-19 Misinformation" While Preserving Free Speech. JAMA 2022;327:1443–4.
[16] Kelly MP, Barker M. Why is changing health-related behaviour so difficult? Public Health 2016;136:109–16.