

# Health workers in focus

Policies and practices for  
successful public response to  
COVID-19 vaccination

Strategic considerations  
for Member States in the  
WHO European Region



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# The document at a glance

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It is well documented that health workers have a powerful influence on the vaccination behaviour and vaccine acceptance of their patients and the public at large. Yet leveraging the positive influence of health workers for COVID-19 vaccination is complex, as health workers may face barriers and challenges related to vaccinating their patients, and may have concerns about vaccination themselves.

**In response to these challenges, this document provides considerations for designing and implementing strategies to support and empower health workers. It is intended for use by governments, health authorities, and others involved in the COVID-19 pandemic response and vaccination rollout at national and subnational levels.**

Drawing on extensive literature and findings from country research, this document proposes that Member States plan multifactorial actions that place health workers at the centre within the context of existing pandemic and COVID-19 vaccination plans.

These actions should be based on the barriers and drivers experienced by health workers and patients; be tailored to specific categories of health workers and their contexts; and relate to individual, system and policy levels. They should be informed by public health, societal, cultural and economic considerations, and ensure that no one is left behind.

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The objective of this framework is to ensure successful public uptake and response to COVID-19 vaccination. It focuses on three intended behaviours of health workers:

- **administering** vaccines to members of the public in a way which promotes uptake, manages expectations and makes patients feel safe, respected, comforted and informed;
- **recommending** the vaccine to the public and managing their expectations, regardless of whether they work with vaccination directly; and
- **accepting** the vaccine for themselves.

Each country should define “health worker” as it deems relevant within its context.

This document proposes five key strategies to empower health workers to help ensure successful public response to COVID-19 vaccination, each with five action points, and offers 20 activity examples as inspiration.

# 5 key strategies at a glance

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## Understand health workers

Make continuous efforts to listen to health workers and understand the barriers and drivers they experience.



## Engage health workers

Engage health workers as active agents and partners in shaping the overall vaccination effort, and ensure that they feel respected and listened to.



## Motivate, support and acknowledge health workers

Ensure that the health system and managers at all levels provide special care, consideration and support to health workers.



## Build health workers' knowledge, skills and confidence

Make effective and regularly adjusted efforts to build the knowledge, skills and confidence of health workers on COVID-19 vaccination and its communication.



## Value health workers as a target group and partners in a crisis

Make concerted efforts to engage and communicate with health workers regarding vaccine safety events, both before and during an eventual crisis.

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# 20 activity examples at a glance

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- Conduct studies with health workers.
  - Establish feedback mechanisms.
  - Conduct supportive observations or visits at vaccination sites.
  - Test information materials.
  - Assign special roles to mid-level managers.
  - Engage volunteers and retirees.
  - Engage health workers as the faces of campaigns.
  - Support peer-to-peer training.
  - Ensure support and recognition from management.
  - Establish mechanisms to improve mental health and well-being.
  - Consider appropriate incentives and recognition.
  - Provide operational support to ease everyday work with vaccination.
  - Organize trainings for health workers.
  - Proactively share information and tools.
  - Continuously update information.
  - Apply a multifaceted approach.
  - Form alliances with health worker organizations.
  - Train trusted spokespersons.
  - Conduct exercises to test crisis response plans.
  - Be accessible and responsive.
-



# Introduction

The COVID-19 pandemic has had extensive public health, social and economic implications, and across the world many people are pleased to see vaccines being rolled out with the aspiration to contain the virus. However, to be fully effective, vaccination must reach the intended populations in each country, and public expectations, acceptance and uptake are critical.

As facilitators and channels to reach the public, health workers represent a resource and an opportunity to help achieve successful COVID-19 vaccination uptake and manage expectations among the public (1–8). However, fully leveraging health workers as positive influencers for COVID-19 vaccination is not straightforward. Health workers may face challenges related to vaccination of their patients (7–9), and may have concerns about vaccination themselves (4).

**In response to these challenges, this document provides considerations for Member States to help them design and implement strategies to support and empower health workers.**

It draws on extensive literature related to vaccine acceptance and demand and recent research related to COVID-19 vaccination, including WHO-supported qualitative studies with health workers in 5 countries of the WHO European Region.\* It was reviewed by topic experts and Member State representatives.

## Who is this document for?

This document is intended for use by governments, health authorities, and others involved in the COVID-19 pandemic response and COVID-19 vaccination rollout at national and subnational levels.

It proposes multifactorial actions at individual, system and policy levels within five strategic areas (Fig. 1). These should be carried out within the context of existing pandemic and COVID-19 vaccination plans, and be based on the current epidemiological situation, behavioural insights, and appropriate societal, cultural and economic considerations to ensure that no one is left behind (10).

\* The findings of these WHO-supported qualitative studies have not yet been published.

**Fig. 1. Five key strategies**





### Health worker roles and behaviours

This document focuses on three health worker behaviours which affect public vaccination expectations, acceptance and uptake:

- **administering** vaccines to patients in a way which promotes uptake and makes patients feel safe, respected, comforted and informed (1,4,11,12);
- **recommending** the vaccine to patients and managing their expectations, regardless of whether they work with vaccination directly; and
- **accepting** the vaccine for themselves (6,13,14).

The types of activities that encourage, motivate and enable these three intended behaviours are often the same. **If not specifically stated, the strategies, actions and activities recommended in this framework can be tailored to address any of these three behaviours.**

### Health workers and patients – definitions

**Each country should define “health worker” as it deems relevant within its context.** WHO defines a health worker as anyone engaged in work actions whose primary intent is to improve Health, including in acute care facilities, long-term care, public health, community based care, social care and home care and more (15). A broad definition allows to include staff who work with population groups that may not be reached within the established mechanisms, including refugees, migrants and communities experiencing disadvantage.

For simplicity, we use the word “patient” to describe anyone intended to receive the vaccine.

# Key strategy: Understand health workers



Most health workers support and promote vaccination, but some face structural, social or personal barriers to doing so. Some are hesitant about vaccines in general (4) or have concerns about COVID-19 vaccination specifically.\* Vaccine perceptions, and acceptance of policies, messages or interventions intended to address them, differ from country to country and among different categories of health workers (4).\* As new evidence related to COVID-19 vaccines and immunization accumulates, the barriers and drivers for health workers may also change over time.

**This calls for making continuous efforts to listen to health workers and understand the barriers and drivers they experience.**

## Barriers and drivers

Exploring the barriers and drivers experienced by health workers may involve qualitative and/or quantitative studies as well as ongoing monitoring, observation and feedback. Research has already identified a wide range of potential barriers and drivers, including some related to:

- personal motivation – a sense of duty to public health, personal protection, concerns about vaccine safety (particularly for new vaccines), trust, emotional affect;
- capability – knowledge, confidence in times of evolving evidence; and
- opportunity – clarity in policies and prioritization, structural and operational support, legal support in case of a vaccine safety event, social norms, peer support.

As barriers and drivers vary between contexts (4), efforts to understand local situations are needed. Activities to better understand health workers should be conducted regularly to detect shifts in perceptions and support needs, and to adjust actions accordingly.

## Testing

The intended target group among health workers should be consulted during the development and implementation of any tool, guidance, message or initiative. Asking health workers for their feedback tests the acceptability, appropriateness and potential impact of the planned effort.

\* This insight is derived from WHO-supported qualitative studies with health workers in 5 countries in the WHO European Region. The findings have not yet been published.



### Lessons learned

It is valuable to systematically gather lessons learned from routine vaccination as well as previous pandemics, crises or mass vaccination events – both what went wrong and what went well. Local staff who were involved can be consulted to share their experience.

### Action points

- ✓ Learn from pre-COVID-19 research on vaccine acceptance and demand.
- ✓ Learn from previous health crises and pandemics.
- ✓ Conduct local studies to understand barriers and drivers among health workers.
- ✓ Test all interventions and messages with the target group before launch.
- ✓ Ensure regular follow-up to detect shifts in perceptions.

### Using insights in practice

Findings from studies with health workers should be used to shape and continuously adjust vaccination efforts. **All actions proposed in this document should be informed by these insights.**

# Activity examples

Activities should be tested and tailored to the context.

**These are a few examples.**

## Conduct studies with health workers

Conduct focus groups, in-depth interviews or other types of studies with health workers to explore the barriers and drivers they face in recommending and delivering COVID-19 vaccination to the public and being vaccinated themselves. The WHO Regional Office for Europe has developed a template protocol and interview guide for such studies which can be obtained from [euinsights@who.int](mailto:euinsights@who.int)

## Establish feedback mechanisms

Establish mechanisms for health workers to report on their well-being and support needs, and systematically register, analyse and respond to the feedback collected. Health workers may feel frustrated if they sense that their input is being ignored by management. Mechanisms may include:

- a helpline or email inbox for health workers;
- online forms with key questions regarding well-being and support needs;
- a brief check-in with staff at the end of each shift that allows them to reflect on their day using a colour-coded response in an online form;
- regular talks at staff meetings or face-to-face talks with managers that focus on health workers' perceptions of their well-being and support needs; and
- the collection of member feedback by health worker organizations to share with health authorities.



## Test information materials

Invite different categories of health workers 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 which they can comment on.

Guidance on testing information materials can be found in [the Field guide to qualitative research for new vaccine introduction](#).

## Conduct supportive observations or visits at vaccination sites

Conduct regular supportive observations at vaccination sites using a list of key points to notice. Everyone involved should consent to these visits and understand that the intention is to support staff, not to check them. Observers can register information about:

- the physical environment: waiting and consultation rooms, hygiene and sanitation;
- vaccination consultation: welcome, registration, information, vaccine administration, follow-up; and
- verbal and nonverbal interpersonal interactions, patient requests and health worker responses.

Guidance on observations can be found in [A guide for exploring health worker/caregiver interactions on immunization](#).

# Key strategy: Engage health workers



Health workers are not just a target group for information; they are a resource and partners in the vaccination campaign. Active engagement builds motivation and vaccine acceptance among health workers, and is necessary to make communication and education efforts effective (16).

**This calls for engaging health workers as active agents and partners in shaping the overall vaccination effort, and ensuring they feel respected and listened to.**

## Contributions from health workers

Asking health workers for their input and engaging them in decision-making can increase their sense of being valued and, with this, their loyalty and dedication (17). Health workers may sit on coordination and decision-making committees, be engaged in developing tools such as answers to frequently asked questions, or help to determine key deliverables or measures of success for their work (18).

Mid-level managers are also potential agents of change (19). While roles differ from country to country, mid-level managers generally work closely with staff and can provide tailored information, promote new initiatives and generate motivation in ways that top management cannot (20–22). Likewise, they can advocate for support to staff when they see the need.

## Champions and social norms

When a respected colleague gets vaccinated, other health workers are more likely to get vaccinated as well (23–26). Evidence shows that engaging respected colleagues as champions of vaccination can make a difference because they build relationships and deliver meaningful and relevant messages (27). This can help to combat resistance and increase willingness to change perceptions and practices (28,29). Champions can be engaged to share information directed at health workers, to participate in trainings, and to promote vaccination among colleagues in health clinics and hospitals.

Notably, focusing communications on those who do not vaccinate may inspire others to decline vaccination as well. Highlighting those who do vaccinate can create a positive social norm among health workers.

## Health worker organizations

Professional associations, labour unions and other bodies representing health workers can also be engaged, potentially as official partners, to help design and develop campaigns, messages and activities. They may reach health workers from a trusted channel, they may independently initiate training, engagement or information activities with their members, or agree to collect input from their members and share this with health authorities.

### Action points

- ✓ Create a positive social norm by highlighting those who vaccinate, not those who do not.
- ✓ Engage health workers to promote vaccination among colleagues.
- ✓ Draw on mid-level managers to promote vaccination and advocate for support to staff.
- ✓ Engage health workers in decision-making.
- ✓ Form alliances with health worker organizations and bodies.



## Activity examples

Activities should be tested and tailored to the context.

**These are a few examples.**

### Assign special roles to mid-level managers

Initiate a programme for mid-level managers (for example, coordinators in subnational public health institutes, chief nurses and medical leads in hospitals) to act as champions. Depending on the system, mid-level managers may be given a role in:

- sharing a compelling narrative about the vaccination rollout goals and health workers' roles
- providing personal recognition and appreciation to staff members
- systematically collecting feedback from staff and communicating this to decision-makers
- engaging staff in decision-making or in setting joint goals
- acknowledging challenges, worries and concerns and supporting staff well-being.

### Engage students and retirees

Engage retired health workers or students to support practical elements of organization and coordination, and to lend a hand at vaccination sites to reduce the burden on vaccinators. Create a positive social norm by promoting such volunteering as a way to give back to health services. Consider engaging students to discuss campaign ideas and contribute innovation and ideas.



### Engage health workers as the faces of campaigns

Engage health workers in campaigns directed at their peers or the public, or encourage them to promote vaccination through their own behaviour by wearing badges ("I am vaccinated against COVID-19") or sharing videos or stories through their personal and/or official social media platforms. Such stories can help to create positive social norms and identification, address misconceptions, and strengthen trust and vaccine acceptance. Health worker bodies or organizations can co-create and -own the campaign.

### Support peer-to-peer training

Engage nurses to train nurses, or physicians to train physicians. Explore which health workers or experts are particularly trusted and ask them to take part in a training programme or educational video. Engage health workers in developing or adapting training programmes so they can assess the relevance, user-friendliness and acceptability of the content and suggest adjustments before rollout. Make sure to inform users that their peers were involved in the process.



# Key strategy: Motivate, support and acknowledge health workers



During this year-long pandemic, many health workers have experienced immense workloads, stress and risk of infection. Health workers have been among the heroes of the pandemic, and are now being asked to support an extraordinary vaccination effort. At the same time, recent research shows that some health workers express distrust in their governments.\* Exceptional efforts to motivate them under these circumstances are critical for success (3,30,31).

**This calls for ensuring that the health system and managers at all levels provide special care, consideration and support to health workers.**

## Workplace conditions and management

Workplace conditions affect motivation (6,32–34). A conducive working environment involves support and recognition from management (17), clarity in roles and responsibilities, and good operational conditions to make everyday work with vaccination easier. Operational support such as free, easy and convenient access to vaccination (35–37), appropriate information and reminders, and clear guidelines recommending occupational COVID-19 vaccination (38) may also motivate health workers to get vaccinated themselves.

## Mental health and well-being

Many health workers have felt under pressure for years (39), and during the pandemic many have lost dear ones and experienced stress and stigma. These individuals are in poor shape to take on new tasks and learning. Motivating them requires provisions for their mental health through guidance, counselling, appropriate working conditions and hours, healthy lifestyles, peer-to-peer support and more.

## Incentives, rewards and public recognition

For many health workers, a sense of pride and duty to promote public health and vaccination is an important driver for recommending vaccines to patients (40). Public recognition, rewards and promotions can help to build this professional pride and motivation. Likewise, incentives have been shown to increase health worker vaccination uptake (41) and to have a more positive impact than punishments (42).

Notably, however, incentives or rewards on their own are not sufficient to motivate health workers (34,43,44) and their impact is highly contextual (45). It is therefore critical to first consult the intended receivers. Incentives may also backfire in some cases, for example, if receivers think the incentive is too modest and therefore disrespectful, or if only some categories of health workers receive incentives.

\* This insight is derived from WHO-supported qualitative studies with health workers in 5 countries in the WHO European Region. The findings have not yet been published.

## Clarity

Understanding one's own role and the purpose of the overall effort creates motivation. Thus motivating health workers involves communicating a compelling narrative that conveys the purpose of COVID-19 vaccination; a clear description of the COVID-19 vaccination services that will be provided and health workers' own roles and functions within this (how, what, where, when); and clear answers to the concerns and questions raised by many health workers, particularly with regard to vaccine safety.

For links to resources related to vaccine safety concerns, see pages 21-22.

## Action points

- ✓ Ensure conducive workplace conditions and recognition from management.
- ✓ Cater for health workers' mental health and well-being.
- ✓ Consult health workers on the possible use of incentives and rewards.
- ✓ Promote health workers' motivation through public recognition.
- ✓ Ensure clarity in health workers' roles and responsibilities and in the purpose of the overall effort.



## Activity examples

Activities should be tested and tailored to the context.

**These are a few examples.**

### Ensure support and recognition from management

Engage management in efforts to support and recognize health workers. Several factors have shown to be effective in increasing motivation, including:

- management openness (34) and enthusiasm (17)
- supervision with constructive feedback mechanisms (see above) (16)
- personal recognition and appreciation (34)
- staff participation in decision-making (17)
- opportunities for peer-to-peer support (17).

### Establish mechanisms to improve mental health

Support health workers to recognize stress and burnout in themselves and others, and cater for their well-being by offering, for example:

- opportunities to rest
- anonymous mental health counselling
- anonymous channels to report poor working conditions
- a checklist to self-assess personal strengths and limitations and to recognize burnout
- a buddy system to confidentially share hopes, joys, concerns and worries
- encouragement to maintain healthy lifestyles (46).

The United States Centers for Disease Control and Prevention (CDC) has compiled tips for health workers to recognize and cope with stress.



### Consider appropriate incentives and recognition

Explore which acts of empathy and recognition, and potentially which incentives and rewards, are most appreciated by health workers. These may be individual or facility-wide, and may be provided consistently or according to pre-agreed targets. Consider public recognition such as honourable mentions or rewards for hospital units or wards providing vaccination (47).

### Provide operational support to ease everyday work with vaccination

Offer health workers consistent, practical support such as:

- safe and pleasant working conditions and access to equipment;
- unambiguous vaccination policies and clarity in priority groups for vaccination (13);
- clarity in staff roles and responsibilities;
- effective vaccination appointment systems to decrease waiting times and patient stress (13);
- access to updated COVID-19 vaccination information;
- good vaccination consultation conditions: adequate time, appropriate space and access to printed handouts (6,13,40); and
- an onsite vaccination counsellor to talk to patients with difficult questions.



# Key strategy: Build health workers' knowledge, skills and confidence

Lack of knowledge can decrease health workers' willingness to recommend vaccination (6). So, too, can lack of confidence in engaging in difficult conversations about vaccination (4,6,40), particularly when patients refer to information found online (1,4). Many health workers are unfamiliar with communication strategies that build trust with those accepting of vaccination, those who are hesitant and those who are refusing (1,2,5).

Some health workers also have concerns about vaccine safety themselves (4),\* particularly in the case of new vaccines. For COVID-19, this may involve fear of side effects, concerns about the vaccine's newness and rapid development using novel vaccination technologies, or distrust in the pharmaceutical industry.\*

Additionally, COVID-19 vaccination providers may not have vaccinated before, or may have only vaccinated children. Some may not have any experience in managing patient expectations in times of vaccine shortage. They are likely subjected to misinformation (48), and must process continually evolving global evidence related to COVID-19 immunization.

Patients have high expectations for tailored information and health workers who are helpful, caring and receptive to their concerns (1). While health workers can improve people's vaccine acceptance (11), they can also have the opposite effect when people feel confused, disrespected or pressured by them (1,12,49).

**This calls for an effective and regularly adjusted effort to build health workers' knowledge, skills and confidence on COVID-19 vaccination and its communication.**

## Passive information versus multifaceted interventions

When building knowledge, it is important to be aware of the knowledge-behaviour gap (50): achieving new knowledge does not automatically change how health workers behave with patients. Passive forms of training such as written guidelines and education modules are less effective if they stand alone (16,51,52). Health worker practices are influenced by a dynamic interplay of social, professional, economic, political and contextual factors within a changing environment (53). Multifaceted interventions at personal and organizational levels are needed, and efforts must be based on an understanding of existing influences on the intended behaviour.

\* This insight is derived from WHO-supported qualitative studies with health workers in 5 countries in the WHO European Region. The findings have not yet been published.

## Areas where knowledge, skills and confidence are needed

Activities to build knowledge, skills and confidence need to be meaningful, culturally sensitive and tailored to the category of health workers receiving them. Several global and regional training programmes for COVID-19 vaccination are available for local adaptation (see the links on page 21). While the situation varies from country to country, a few suggested topics for training are summarized in Box 3.

## Transparency

In providing information to health workers, the possible safety issues related to COVID-19 vaccines and immunization in general need to be openly addressed and acknowledged as a real and

legitimate challenge. This acknowledgement may increase motivation, address health workers' own concerns, and help them to address those of their patients.

## Action points

- ✓ Consider key areas for building knowledge: COVID-19 vaccines, vaccine safety events and communication.
- ✓ Combine passive education with active engagement.
- ✓ Adapt global training programmes.
- ✓ Be transparent in sharing both the benefits and the risks related to vaccination.
- ✓ Make sure trainings and information are meaningful, culturally sensitive and tailored.

## Suggested topics for trainings

### COVID-19 vaccines

Trainings can provide technical information on vaccine production, prequalification procedures, transportation and storage, appointments and administration, contraindications, pain mitigation, vaccination schedules, prioritization of target groups and legislation frameworks, supply, the use of different kinds of vaccines, vaccine ingredients and safety, vaccine efficacy and effectiveness, vaccine side effects, and balanced information about the risks and benefits of vaccines (1).

### Adverse Events Following Immunization (AEFIs)

Trainings can offer information about the different types of AEFIs, AEFI investigation and causality assessment, national response and reporting mechanisms for AEFIs, and appropriate responses to AEFIs, in particular those relevant to COVID-19 vaccination (for example, anaphylactic shock).

Mass vaccination of the public increases the risk of anxiety-related events, so health workers should be trained to prevent and respond to these specifically.

### Communicating with patients

Trainings can build health workers' skill in discussing vaccination with the public and tailoring their conversations to those who are accepting of vaccination, those who are hesitant and those who are refusing (1). This may involve unambiguous, easily understood language using a guiding style (12,54,55), respectful conversation techniques, and motivational interviewing to explore the position of patients and support them in overcoming concerns (54,56,57). Trainings can also provide guidance on how to manage social media communication.

For links to global training modules and guidance for health workers, see page 24.

## Activity examples

Activities should be tested and tailored to the context.

**These are a few examples.**

### Organize trainings for health workers

Conduct online or face-to-face trainings that use effective approaches, such as:

- the integration of audits and feedback collection in training modules
- practise exercises and opportunities for interactions among learners
- automatic email reminders about education (43,51)
- learning through observation of typical situations
- incentives (continuing medical education points, etc.).

Engage health workers in planning and implementation to make sure trainings are meaningful, culturally sensitive and tailored to participants (36). Conduct evaluations to continuously improve trainings.

### Proactively share information and tools

When official information is not available, health workers use alternative sources, such as the internet, to find information about COVID-19 vaccination.\* Tailored, effective and clear official communication and up-to-date information enable health workers to feel informed and in control. Proactively share easily accessible information with health workers through various tools, materials and channels, such as:

- online and intranet sites
- chats or telephone hotlines with vaccine experts to answer difficult questions
- job aids and lists of answers to frequently asked questions
- newsletters/bulletins
- staff meetings and briefings.

### Apply a multifaceted approach

For the best results, combine training, information products and updates with efforts to engage, motivate, incentivize and activate health workers.

### Continuously update information

COVID-19 vaccination is affected by evolving evidence and complex changes that continue to take place, including the introduction of new vaccines, changes in supply, changes in vaccination calendars and more. Consider mechanisms for continuous updates, for example, a protected intranet or a health worker WhatsApp group or another instant messaging app.



# Key strategy: Value health workers as a target group and partners in a crisis



Adverse events may happen following vaccination. Sometimes these are caused by the vaccine or vaccination, and sometimes they are coincidental. Regardless, such events can potentially erode confidence in vaccines and in the authorities delivering them (58).

A crisis in which COVID-19 vaccination is associated with adverse reactions will create immediate pressure on health workers, who will be sought out by members of the public for guidance and advice. If left uninformed and unengaged by health authorities in these situations, health workers can withdraw from wholehearted support of vaccination (59). Conversely, well informed health workers who feel engaged, respected and listened to, and who trust the information they receive, can become critical allies in strengthening the public's trust in immunization and in health authorities (60).

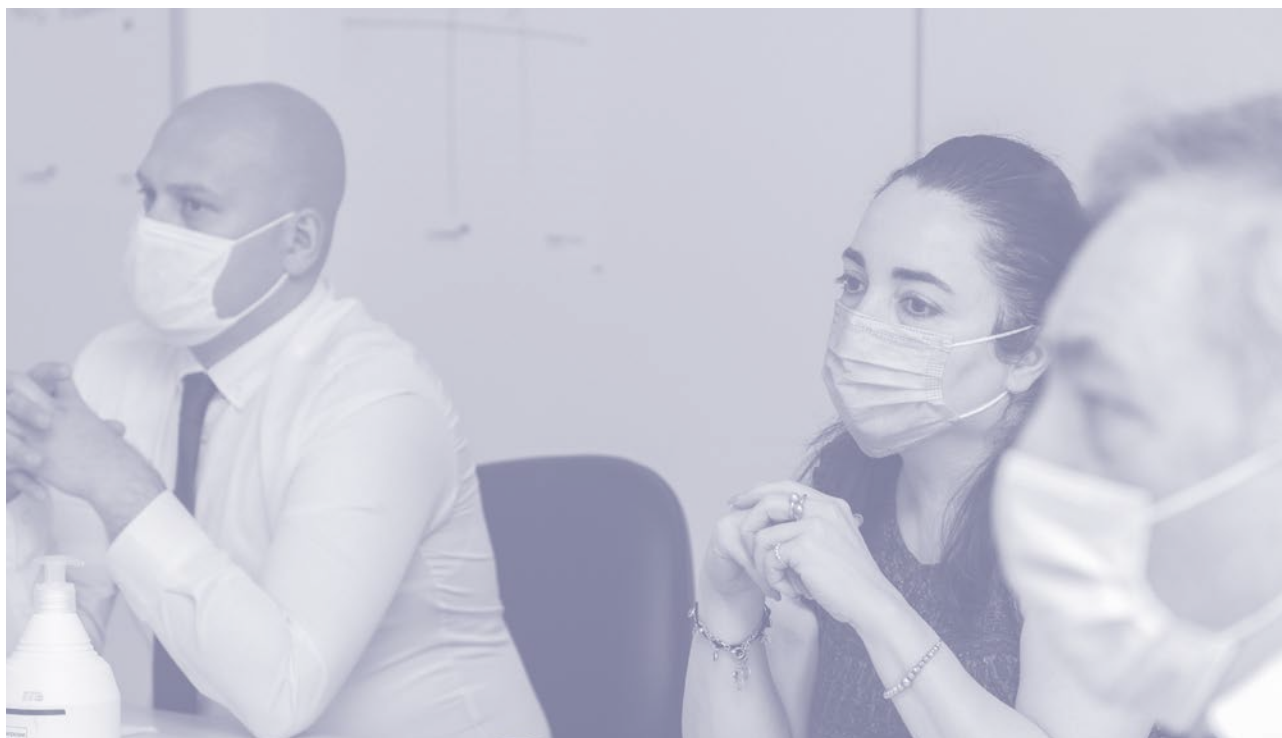
**This calls for concerted efforts to engage and communicate with health workers regarding vaccine safety events, both before and during an eventual crisis.**

## Health workers as a source of information

Health workers who witness an adverse reaction following vaccination may know important details about the course of events and may hold local insights. This information can be drawn upon to understand what happened, and the health workers can be involved in any investigation of events. Following an event, mechanisms can be established to allow health workers across the country to share with health authorities vital information about public perceptions and concerns gleaned from their direct interactions with patients.

## Health workers' own concerns

In addition to engaging health workers as channels to reassure the public, an effective crisis response must address health workers' own concerns. Health workers may be hesitant towards vaccination themselves (4), and uncertainty regarding the cause of a vaccine safety event is likely to increase their concerns. Transparency and nuance in sharing what is known and unknown at every stage is critical. The provision of guidance on how to respond to patients' concerns is equally important.



### Governmental support in case of a crisis

Several studies have found that some health workers are afraid of being unsupported and blamed should an adverse event occur after vaccinating a patient (7,61).<sup>\*</sup> Framing messages carefully, clearly outlining the legal and regulatory provisions for health workers, and assuring health workers that they will have appropriate support in case of an adverse event are critical.

### Aligned messaging

In a crisis, conflicting messages create confusion and distrust among the public (58). Ideally, health workers convey the same messages as health authorities when approached by patients for advice or by members of the media for a comment. This means that health authorities should proactively and continuously share key messages with health workers as a crisis evolves, for example, via email, an intranet or WhatsApp or other instant messaging app.

### Rapid response through effective preparedness

The pace of the response can determine how a crisis develops (62). Preparedness allows for a more rapid and impactful response (60), and includes establishing mechanisms to share information with health workers; engaging in strategic collaboration with professional associations, unions or others who are respected by and have access to health workers; and engaging and training health workers as trusted spokespersons who can be drawn upon in case of a crisis.

### Action points

- ✓ In a crisis, draw on the knowledge health workers gain from their direct interaction with people.
- ✓ Share messages with health workers in a crisis so you can speak with one voice.
- ✓ Acknowledge, respect and address concerns among health workers in a crisis.
- ✓ Ensure clear legal and regulatory provisions and legal support to health workers in case of a vaccine safety event.
- ✓ Prepare now – before the crisis hits.

<sup>\*</sup> This insight is derived from WHO-supported qualitative studies with health workers in 5 countries in the WHO European Region. The findings have not yet been published.



## Activity examples

Activities should be tested and tailored to the context.

**These are a few examples.**

### Form alliances with health worker organizations

Build relations with those who are trusted by health workers and who have easy access to them, such as professional associations or labour unions. Strengthen their knowledge of COVID-19 vaccination. Invite them as members or guests to your COVID-19 vaccination coordination group.

Through such partnerships, health worker organizations may be willing to reach out to their members in a crisis, or act as a credible third party for media interviews or public events, especially in situations where public confidence in health authorities has been negatively affected. They may also ensure aligned messaging for the good of public health and help to keep each other informed in a crisis (60).

### Train trusted spokespersons

When official information in a crisis, public confidence in health authorities may be affected, and other spokespersons may be better placed to reach the public with evidence-based messages. Train health experts, staff or other trusted health workers (preferably before a crisis) to serve as spokespersons throughout the vaccination campaign. Support them with tips for public speaking as well as information about commonly asked questions and the strategies used by journalists.

The WHO Regional Office for Europe has prepared detailed guidance on these issues for its online vaccine safety communication library, in [English](#) and [Russian](#).

### Conduct exercises to test crisis response plans

Design and conduct a realistic exercise that tests responses from all stakeholders, including health workers. Identify weaknesses and gaps and rewrite plans, agreements, messages and materials as appropriate to improve response activities (60).

### Be accessible and responsive

Crises are hectic, and health authorities (and those managing the crisis response) need to remain accessible to health workers who are being approached by concerned members of the public for reassurance and information. Establish mechanisms such as a hotline for answering questions. Make sure health workers know whom to contact if they need to share vital information obtained locally.



# Supporting documents

Resources for health workers		
COVID-19 Vaccination Communication Toolkit For Medical Centers, Pharmacies, and Clinicians	CDC	<a href="#">EN</a>
Online learning module on communicating with parents about vaccination	Sharing Knowledge About Immunisation	<a href="#">EN</a>
Online training on COVID-19 vaccination for health workers	WHO (2020)	<a href="#">EN</a>
Online training on interpersonal communication for immunization for front-line workers	United Nations Children's Fund (UNICEF) Europe and Central Asia Regional Office (ECARO) (2019)	<a href="#">EN</a> (RU upon request)
Social media toolkit for healthcare professionals	European Union (2020)	<a href="#">EN</a>
Tips for health workers to recognize and cope with stress during COVID-19	CDC	<a href="#">EN</a>
Questions and answers (Q&A): Vaccination (general)	WHO	<a href="#">AR</a> <a href="#">EN</a> <a href="#">ES</a> <a href="#">FR</a> <a href="#">RU</a> <a href="#">ZH</a>
Q&A: Vaccine safety (general)	WHO	<a href="#">AR</a> <a href="#">EN</a> <a href="#">ES</a> <a href="#">FR</a> <a href="#">RU</a> <a href="#">ZH</a>
Q&A: COVID-19 vaccines	WHO	<a href="#">AR</a> <a href="#">EN</a> <a href="#">ES</a> <a href="#">FR</a> <a href="#">RU</a> <a href="#">ZH</a>
Q&A: COVID-19 vaccine research and development	WHO	<a href="#">AR</a> <a href="#">EN</a> <a href="#">ES</a> <a href="#">FR</a> <a href="#">RU</a> <a href="#">ZH</a>
Q&A: COVID-19 vaccine access and allocation	WHO	<a href="#">AR</a> <a href="#">EN</a> <a href="#">ES</a> <a href="#">FR</a> <a href="#">RU</a> <a href="#">ZH</a>
Q&A: Country readiness and delivery	WHO	<a href="#">EN</a>
Vaccines explained: How do vaccines work?	WHO	<a href="#">AR</a> <a href="#">EN</a> <a href="#">ES</a> <a href="#">FR</a> <a href="#">RU</a> <a href="#">ZH</a>
Vaccines explained: How are vaccines developed?	WHO	<a href="#">AR</a> <a href="#">EN</a> <a href="#">ES</a> <a href="#">FR</a> <a href="#">RU</a> <a href="#">ZH</a>
Vaccines explained: Manufacturing, safety and quality control of vaccines	WHO	<a href="#">EN</a> <a href="#">FR</a>
Vaccines explained: The different types of COVID-19 vaccines	WHO	<a href="#">EN</a>
Vaccines explained: How will there be fair and equitable allocation of limited supplies?	WHO	<a href="#">EN</a>

<b>Resources to conduct studies with health workers</b>		
A guide for exploring health worker/caregiver interactions on immunization	WHO, UNICEF, Maternal and Child Survival Programme, John Snow, Inc., United States Agency for International Development (2018)	<a href="#">EN</a>
Field guide to qualitative research for new vaccine introduction	WHO Regional Office for Europe (2018)	<a href="#">EN</a>
<b>Resources with information on COVID-19 vaccination and deployment</b>		
European vaccination information portal: COVID-19 vaccines subpage	European Centre for Disease Prevention and Control	<a href="#">EN</a>
Guidance on developing a national deployment and vaccination plan for COVID-19 vaccines, 16 November 2020	WHO (2020)	<a href="#">EN</a>
Online platform on COVID-19 vaccines: development, evaluation, approval and monitoring	European Medicines Agency	<a href="#">EN</a>
Operational guidance to support Member States in preparing for and implementing COVID-19 vaccination	WHO Regional Office for Europe (2020)	<a href="#">EN</a> <a href="#">RU</a>
Strategic Advisory Group of Experts on Immunization (SAGE) COVID-19 vaccines technical documents	WHO	<a href="#">EN</a>
Strategic Advisory Group of Experts on Immunization (SAGE) Roadmap For Prioritizing Uses Of COVID-19 Vaccines In The Context Of Limited Supply	WHO	<a href="#">AR</a> <a href="#">EN</a> <a href="#">ES</a> <a href="#">FR</a> <a href="#">RU</a> <a href="#">ZH</a>
<b>Resources with guidance on communication and vaccine acceptance</b>		
Behavioural considerations for acceptance and uptake of COVID-19 vaccines	WHO (2020)	<a href="#">EN</a>
COVID-19 global risk communication and community engagement strategy, December 2020 - May 2021: interim guidance, 23 December 2020	WHO (2020)	<a href="#">EN</a>
Pandemic fatigue – reinvigorating the public to prevent COVID-19. Policy framework for supporting pandemic prevention and management	WHO Regional Office for Europe (2020)	<a href="#">EN</a> <a href="#">RU</a>
Resource pack on countering online misinformation	UNICEF ECARO	<a href="#">EN</a>
Tailoring immunization programmes for seasonal influenza (TIP FLU). A guide for increasing health care workers' uptake of seasonal influenza vaccination	WHO Regional Office for Europe (2015)	<a href="#">EN</a>
The COVID-19 vaccine communication handbook. A practical guide for improving vaccine communication and fighting misinformation	Lewandowsky et al. (2021)	<a href="#">EN</a>
The debunking handbook	Lewandowsky et al. (2021)	<a href="#">EN</a> <a href="#">CZ</a> <a href="#">DE</a> <a href="#">IT</a> <a href="#">RU</a> <a href="#">TU</a>
Vaccine misinformation management field guide. Guidance for addressing a global infodemic and fostering demand for immunization	UNICEF (2020)	<a href="#">EN</a>
Vaccine safety communication library	WHO Regional Office for Europe	<a href="#">EN</a> <a href="#">RU</a>

# References

- 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. doi:10.1002/14651858.CD011787.pub2.
- Berry NJ, Danchin M, Trevena L, Witteman HO, Kinnersley P, Snelling T et al. Sharing knowledge about immunisation (SKAI): an exploration of parents' communication needs to inform development of a clinical communication support intervention. *Vaccine.* 2018;36(44):6480–90. doi:10.1016/j.vaccine.2017.10.077.
- Why is motivation important in health care? [webpage]. Kensington: Human Resources for Health Global Resource Centre; 2021 ([https://www.hrresourcecenter.org/HRH\\_Info\\_Motivation.html](https://www.hrresourcecenter.org/HRH_Info_Motivation.html), accessed 25 January 2021).
- Karafillakis E, Dinca I, Apfel F, Cecconi S, Wurz A, Takacs J et al. Vaccine hesitancy among healthcare workers in Europe: a qualitative study. *Vaccine.* 2016;34:5103–20. doi:10.1016/j.vaccine.2016.08.029.
- Simone B, Carrillo-Santistevé P, Lopalco PL. Healthcare workers' role in keeping MMR vaccination uptake high in Europe: a review of the evidence. *Euro Surveill.* 2012;17:ii=20206 (<https://www.eurosurveillance.org/content/10.2807/ese.17.26.20206-en>, accessed 25 January 2021).
- Paterson P, Meurice F, Stanberry LR, Glismann S, Rosenthal SL, Larson HJ. Vaccine hesitancy and healthcare providers. *Vaccine.* 2016;34(52):6700–6. doi:10.1016/j.vaccine.2016.10.042.
- Musa S, Skrijelj V, Kulo A, Habersaat KB, Smjecanin M, Primorac E et al. Identifying barriers and drivers to vaccination: a qualitative interview study with health workers in the Federation of Bosnia and Herzegovina. *Vaccine.* 2020;38(8):1906–14.
- Habersaat KB, Pistol A, Stanescu A, Hewitt C, Grbic M, Butu C et al. Measles outbreak in Romania: understanding factors related to suboptimal vaccination uptake. *Eur J Public Health.* 2020;30(5):986–92. doi:10.1093/eurpub/ckaa079.
- Vaccination consultations insight study in Romania. Final report. Bucharest: Romanian Ministry of Health, National Center for Disease Control and Prevention; 2019.
- European Programme of Work. United Action for Better Health in Europe [website]. Copenhagen: WHO Regional Office for Europe; 2021 (<https://www.euro.who.int/en/health-topics/health-policy/european-programme-of-work/European-Programme-of-Work-20202025-United-Action-for-Better-Health-in-Europe>, accessed 25 January 2021).
- Kaufman J, Synnot A, Ryan R, Hill S, Horey D, Willis N et al. Face to face interventions for informing or educating parents about early childhood vaccination. *Cochrane Database Syst Rev.* 2013;Cd010038. doi:10.1002/14651858.CD010038.pub2.
- Leask J, Kinnersley P, Jackson C, Cheater F, Bedford H, Rowles G. Communicating with parents about vaccination: a framework for health professionals. *BMC Pediatr.* 2012;12:154. doi:10.1186/1471-2431-12-154.
- 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;38:4805–15. doi:10.1016/j.vaccine.2020.04.033.
- Smith S, Sim J, Halcomb E. Nurses' knowledge, attitudes and practices regarding influenza vaccination: an integrative review. *J Clin Nurs.* 2016;25:2730–44. doi:10.1111/jocn.13243.
- WHO SAGE roadmap for prioritizing uses of covid-19 vaccines in the context of limited supply. An approach to inform planning and subsequent recommendations based upon epidemiologic setting and vaccine supply scenarios. Annex 3. Geneva: WHO; 2020 (<https://www.who.int/publications/m/item/who-sage-roadmap-for-prioritizing-uses-of-covid-19-vaccines-in-the-context-of-limited-supply>, accessed 27 January 2021).
- 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. doi:10.1016/S0140-6736(05)67028-6.
- Curtis E, O'Connell R. Essential leadership skills for motivating and developing staff. *Nurs Manag.* 2011;18(5):32–5. doi:10.7748/nm2011.09.18.5.32.c8672.
- Brett, JF, Luciano MM. Three steps for engaging health care providers in organizational change. Cambridge: Harvard Business Review; 2018 (<https://hbr.org/2018/10/3-steps-for-engaging-health-care-providers-in-organizational-change>, accessed 25 January 2021).
- Huy QN. Emotional balancing of organisational continuity and radical change: the contribution of middle managers. *Adm Sci Q.* 2002;47:31–69. doi:10.2307/3094890.
- Floyd SW, Wooldridge B. Middle management's strategic influence and organisational performance. *J Manag Stud.* 1997;34:465–85. doi:10.1111/1467-6486.00059.
- Pappas JM. Middle managers' strategic influence: investigating network centrality and perceptual deviance. *Academy of Management Proceedings.* 2017;6–112004. doi:10.5465/ambpp.2004.13863648.
- Birken SA, Lee S-YD, Weiner BJ. Uncovering middle managers' role in healthcare innovation implementation. *Implement Sci.* 2012;7:28. doi:10.1186/1748-5908-7-28.
- Mo PKH, Wong CHW, Lam EHK. Can the Health Belief Model and moral responsibility explain influenza vaccination uptake among nurses? *J Adv Nurs.* 2019;75:1188–206. doi:10.1111/jan.13894.
- Schmid P, Rauber D, Betsch C, Lidolt G, Denker ML. Barriers of influenza vaccination intention and behavior – a systematic review of influenza vaccine hesitancy, 2005–2016. *PLoS One.* 2017;12:e0170550. doi:10.1371/journal.pone.0170550.
- Lau JTF, Yeung NCY, Choi KC, Cheng MYM, Tsui HY, Griffiths S. Factors in association with acceptability of A/H1N1 vaccination during the influenza A/H1N1 pandemic phase in the Hong Kong general population. *Vaccine.* 2010;28:4632–7. doi:10.1016/j.vaccine.2010.04.076.
- Stokes S, Ismail K. Uptake of the H1N1 vaccine by maternity staff at a university hospital in the UK. *Int J Gynecol Obstet.* 2011;112:247. doi:10.1016/j.ijgo.2010.10.009.
- Soo S, Berta W, Baker GR. Role of change champions in the implementation of patient safety practice change. *Healthc Q.* 2009;12:123–8. doi:10.12927/hcq.2009.20979.
- Bonawitz K, Wetmore M, Heisler M, Dalton VK, Damschroder LJ, Forman J et al. Champions in context: which attributes matter for change efforts in healthcare? *Implement Sci.* 2020;15(1):62. doi:10.1186/s13012-020-01024-9.
- Bunce AE, Grub I, Davis JV, Cowburn S, Cohen D, Oakley J et al. Lessons learned about the effective operationalization of champions as an implementation strategy: results from a qualitative process evaluation of a pragmatic trial. *Implement Sci.* 2020;15:87. doi:10.1186/s13012-020-01048-1.
- Buchan J. Planning for change: developing a policy framework for nursing labour markets. *Int Nurs Rev.* 2000;47(4):199–206. doi:10.1046/j.1466-7657.2000.00047.x.
- Luoma M. Increasing the motivation of health-care workers. Chapel Hill: IntraHealth International; 2006 ([https://www.intrahealth.org/sites/ihweb/files/attachment-files/tecbrief\\_7.pdf](https://www.intrahealth.org/sites/ihweb/files/attachment-files/tecbrief_7.pdf), accessed 25 January 2021).
- Willis-Shattuck M, Bidwell P, Thomas S, Wyness L, Blaauw D, Ditlopo P. Motivation and retention of health workers in developing countries: a systematic review. *BMC Health Serv Res.* 2008;8:247. doi:10.1186/1472-6963-8-247.

33. Hongoro C, Normand C. Health workers: building and motivating the workforce. In: Jamison DT, Breman JG, Measham AR, Alleyne G, Claeson M, Evans DB et al., editors. *Disease control priorities in developing countries*, 2nd edition. Washington: International Bank for Reconstruction and Development, World Bank; 2006 (<https://www.ncbi.nlm.nih.gov/books/NBK11730/>, accessed 25 January 2021).
34. Afolabi, A, Fernando, S, Bottiglieri, T. The effect of organisational factors in motivating healthcare employees: a systematic review. *Br J Health Care Manag.* 2018;24:603–10. doi:10.12968/bjhc.2018.24.12.603.
35. Steiner M, Vermeulen LC, Mullahy J, Hayney MS. Factors influencing decisions regarding influenza vaccination and treatment: a survey of healthcare workers. *Infect Control Hosp Epidemiol.* 2002;23:625–7. doi:10.1086/501984.
36. Hollmeyer H, Hayden F, Mounts A, Buchholz U. Review: interventions to increase influenza vaccination among healthcare workers in hospitals. *Influenza Other Respir Viruses.* 2013;7:604–21. doi:10.1111/irv.12002.
37. Ajenjo MC, Woeltje KF, Babcock HM, Gemeinhart N, Jones M, Fraser VJ. Influenza vaccination among healthcare workers: ten-year experience of a large healthcare organization. *Infect Control Hosp Epidemiol.* 2010;31(3):233–40. doi:10.1086/650449.
38. Maltezos HC, Dedoukou X, Patrinos S, Maragos A, Poufta S, Gargalianos P et al. Determinants of intention to get vaccinated against novel (pandemic) influenza A H1N1 among healthcare workers in a nationwide survey. *J Infect.* 2010;61:252–8. doi:10.1016/j.jinf.2010.06.004.
39. Carrieri D, Briscoe S, Jackson M, Mattick K, Papoutsis C, Pearson M et al. "Care under pressure": a realist review of interventions to tackle doctors' mental ill health and its impacts on the clinical workforce and patient care. *BMJ Open.* 2018;8(2):e021273. doi:10.1136/bmjopen-2017-021273.
40. Yaqub O, Castle-Clarke S, Sevdalis N, Chataway J. Attitudes to vaccination: a critical review. *Soc Sci Med.* 2014;112:1–11. doi:10.1016/j.socscimed.2014.04.018.
41. Centers for Disease Prevention and Control. Interventions to increase influenza vaccination of health-care workers: California and Minnesota. *MMWR Morb Mortal Wkly Rep.* 2005;54:196–9 (<https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5408a2.htm>, accessed 25 January 2021).
42. Sandman PM, Lanard J. Convincing health care workers to get a flu shot... without the hype [webpage]. Brooklyn: Peter Sandman Risk Communication Website; 2009 (<https://www.psandman.com/col/HCWs.htm>, accessed 25 January 2021).
43. Chauhan BF, Jeyaraman MM, Mann AS, Lys J, Skidmore B, Sibley KM et al. Behavior change interventions and policies influencing primary healthcare professionals' practice – an overview of reviews. *Implement Sci.* 2017;12(1):3. doi:10.1186/s13012-017-0568-x.
44. Skefales A, Plakas S, Fouka G. Burnout and its association with working conditions among Greek hospital nurses in a time of financial crisis. *Open J Nurs.* 2014;4:548–63. doi:10.4236/ojn.2014.47058.
45. Guidelines: incentives for health professionals. International Council of Nurses, International Pharmaceutical Federation, World Dental Federation, World Medical Association, International Hospital Federation, World Confederation for Physical Therapy; 2008 ([https://www.who.int/workforcealliance/knowledge/resources/guidelines\\_healthprofessional/en/](https://www.who.int/workforcealliance/knowledge/resources/guidelines_healthprofessional/en/), accessed 25 January 2021).
46. In the face of a pandemic: ensuring safety and health at work. Geneva: International Labour Organization; 2020 ([https://www.ilo.org/wcmsp5/groups/public/---ed\\_protect/---protrav/---safework/documents/publication/wcms\\_742463.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/publication/wcms_742463.pdf), accessed 25 January 2021).
47. Anikeeva O, Braunack-Mayer A, Rogers W. Requiring influenza vaccination for health care workers. *Am J Pub Health.* 2009;99:24–9. doi:10.1016/j.vaccine.2005.01.043.
48. Abramson ZH, Levi O. Influenza vaccination among primary healthcare workers. *Vaccine.* 2008;26:2482–9. doi:10.1016/j.vaccine.2008.03.011.
49. Brown VB, Oluwatosin OA, Akinyemi JO, Adeyemo AA. Effects of community health nurse-led intervention on childhood routine immunization completion in primary health care centers in Ibadan, Nigeria. *J Community Health.* 2016;41:265–73. doi:10.1007/s10900-015-0092-3.
50. Kelly MP, Barker M. Why is changing health-related behaviour so difficult? *Public Health.* 2016;136:109–16. doi:10.1016/j.puhe.2016.03.030.
51. Mostofian F, Ruban C, Simunovic N, Bhandari M. Changing physician behavior: what works? *Am J Manag Care.* 2015;21(1):75–84 (<https://www.ajmc.com/view/changing-physician-behavior-what-works>, accessed 25 January 2021).
52. Ndiaye SM, Hopkins DP, Shefer AM, Hinman AR, Briss PA, Rodewald L et al. Interventions to improve influenza, pneumococcal polysaccharide, and hepatitis B vaccination coverage among high-risk adults: a systematic review. *Am J Prev Med.* 2005;28:248–79. doi:10.1016/j.amepre.2005.02.016.
53. Haines A, Kuruwilla S, Borchert M. Bridging the implementation gap between knowledge and action for health. *Bull World Health Org.* 2004;82:724–32 (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2623035/>, accessed 25 January 2021).
54. Gagneur A, Lemaître T, Gosselin V, Farrands A, Carrier N, Petit G et al. A postpartum vaccination promotion intervention using motivational interviewing techniques improves short-term vaccine coverage: PromoVac study. *BMC Public Health.* 2018;18:811. doi:10.1186/s12889-018-5724-y.
55. Gagneur A, Gosselin V, Dubé É. Motivational interviewing: a promising tool to address vaccine hesitancy. *Vaccine.* 2018;36:6553–5. doi:10.1016/j.vaccine.2017.10.049.
56. Freed GL, Clark SJ, Butchart AT, Singer DC, Davis MM. Sources and perceived credibility of vaccine-safety information for parents. *Pediatrics.* 2011;127:S107–12. doi:10.1542/peds.2010-1722P.
57. Glanz JM, Kraus CR, Daley MF. Addressing parental vaccine concerns: engagement, balance, and timing. *PLoS Biol.* 2015;13:e1002227. doi:10.1371/journal.pbio.1002227.
58. Vaccination and trust. How concerns arise and the role of communication in mitigating crises. Copenhagen: WHO Regional Office for Europe; 2017 ([https://www.euro.who.int/\\_data/assets/pdf\\_file/0004/329647/Vaccines-and-trust.PDF](https://www.euro.who.int/_data/assets/pdf_file/0004/329647/Vaccines-and-trust.PDF), accessed 25 January 2021).
59. Habersaat KB. Multifactorial responses to complex challenges – the HPV vaccine controversy. Catalonia: HPV World; 2018 (<https://www.hpworld.com/articles/multifactorial-responses-to-complex-challenges-the-hpv-vaccine-controversy/>, accessed 25 January 2021).
60. Stakeholder management. Online vaccine safety communication library [website]. Copenhagen: WHO Regional Office for Europe; 2017 (<https://www.euro.who.int/en/health-topics/disease-prevention/vaccines-and-immunization/publications/2017/stakeholder-management-2017>, accessed 25 January 2021).
61. Nielsen SM, Franklin BAK, Jackson C, Ceban A, Shishniashvili M, Sahakyan G et al. New vaccine introduction: strengthening health literacy to increase health equity. *Public Health Panorama.* 2019;5:123–9 (<https://apps.who.int/iris/bitstream/handle/10665/327062/php-5-2-3-291-300-eng.pdf?sequence=1&isAllowed=y>, accessed 25 January 2021).
62. Hermann CF. Some consequences of crisis which limit the viability of organizations. *Admin Sci Quart.* 1963;8(1):61–82. doi:10.2307/2390887.

## The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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## Member States

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Azerbaijan	Israel	Russian
Belarus	Italy	Federation
Belgium	Kazakhstan	San Marino
Bosnia and Herzegovina	Kyrgyzstan	Serbia
Bulgaria	Latvia	Slovakia
Croatia	Lithuania	Slovenia
Cyprus	Luxembourg	Spain
Czechia	Malta	Sweden
Denmark	Monaco	Switzerland
Estonia	Montenegro	Tajikistan
Finland	Netherlands	Turkey
France	North Macedonia	Turkmenistan
Georgia	Norway	Ukraine
Germany	Poland	United Kingdom
		Uzbekistan