Evaluation report for the training module “Communicating with patients about COVID-19 vaccination”
Abstract

The training module “Communicating with patients about COVID-19 vaccination”, developed by the Vaccine-preventable Diseases and Immunization Programme (VPI) of the WHO Regional Office for Europe, is designed to provide health workers with the knowledge, skills, confidence and resources necessary for responding to patients’ concerns about COVID-19 vaccination. This document describes the evaluation of the training module and its implementation in Greece, which was conducted jointly by VPI and the Behavioural and Cultural Insights (BCI) Unit of the Regional Office. It follows a new evaluation framework, developed by the BCI Unit, that is tailored to the complexities of the pandemic and proposes a stage-wise model for evaluating the effectiveness and sustainability of behaviourally and culturally informed interventions in complex settings. The evaluation was completed on 9 September 2022.
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This document was developed jointly by the Behavioural and Cultural Insights Unit and the Vaccine-preventable Diseases and Immunization Programme of the WHO Regional Office for Europe.

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The training module “Communicating with patients about COVID-19 vaccination”, developed by the Vaccine-preventable Diseases and Immunization Programme (VPI) of the WHO Regional Office for Europe, is designed to provide health workers with the knowledge, skills, confidence and resources necessary for responding to patients’ concerns about COVID-19 vaccination. An evaluation of the training module and its implementation in Greece, conducted jointly by VPI and the Behavioural and Cultural Insights (BCI) Unit of the Regional Office, took place between May and September 2022. The evaluation was conducted online, which allowed 118 health workers from all over Greece to participate. Data for the evaluation were generated using a combination of quantitative and qualitative methods: pre- and post-training questionnaires, observations of how participants used the communication skills in simulated consultations, in-depth interviews, and focus-group discussions.

A new evaluation framework, developed by the BCI Unit, was piloted for this evaluation project. Tailored to the complexities of the pandemic, this framework proposes a stage-wise model for evaluating the effectiveness and sustainability of behaviourally and culturally informed interventions in complex settings. It uses contribution analysis to address the challenge of assessing causality during times of change, and includes both impact and process evaluation. It also provides a method for measuring unintended positive and negative effects of interventions on trust, well-being and social cohesion.

The impact evaluation provided evidence that the training module largely achieved its main objectives to strengthen participants’ confidence to respond effectively to patients’ concerns about COVID-19.
vaccination, and to improve their behaviours and interactions with patients.

The newly acquired communication skills were found to be easy to use and effective during challenging conversations with patients. While participants’ levels of confidence and application of the new skills were highest immediately after the training, some skills, such as affirming patients’ strengths and providing encouragement, continued to be employed even three months after the training. Interestingly, the application of these skills was shown not to be time-intensive, and thus could be incorporated within a reasonable amount of time in a typical patient consultation. The application of the acquired skills in practice was confirmed by self-reporting and observations alike.

The training module focused on the COVID-19 vaccination context; however, the evaluation indicated that participants intended to continue using the new skills for other situations in everyday clinical practice as well.

Beyond the training’s effect on patient-health worker interactions, the evaluation showed that improving communication skills may have positive effects on building trust with patients, on reducing stress among health workers and thus increasing their sense of well-being at work, and on increasing feelings of effectiveness at work. The skills acquired helped to strengthen workplace social relations through improved social support, teamwork and conflict resolution, which in turn helped health workers to feel calmer, more relaxed and less alone with the challenging task of responding to patients’ concerns.

While the training module was generally highly appreciated by participants, the process evaluation identified that in-person training is preferred, that interaction could be increased, and that training in the language spoken by participants would be appreciated. It also found that post-training access to the materials and recordings could support continuous learning and sharing with colleagues, and that instructor-led follow-up sessions would be useful, especially three months post-training.
The COVID-19 vaccination response in Greece

The first COVID-19 case was reported in Greece on 26 February 2020. By mid-April 2022, shortly before this evaluation began, 3,195,887 cases and 28,274 deaths related to COVID-19 had been reported (1,2).

Vaccination against COVID-19 was initiated in late-December 2020. In October 2021, a digital platform aimed at increasing ease of access to vaccination was opened, and citizens could book an appointment for vaccination using their social security number. Non-citizens could make an appointment using a temporary social security number. To further increase access to the digital platform, vaccinations could be booked through pharmacists and public workers at citizen service centres.

Health workers involved in the vaccination campaign were recruited from the public and private sectors. Vaccination took place in hospitals, health centres and mobile clinics. Numerous efforts were made to offer vaccinations to the entire population, including mobile clinics in the northern regions and at the entrances of villages in some of the decentralized areas. Some islands needed mobile clinics, and others had health-care facilities where vaccination was conducted. Home vaccination was offered to people with disabilities and others who were homebound. Vaccinations were also offered at refugee and migrant camps.

By mid-April 2022, 72% of Greece’s population had been vaccinated against COVID-19. However, variance in coverage between northern and southern regions prompted public health organizations, including the Ministry of Health and WHO, to plan efforts to increase the vaccination rate in low-uptake areas.
The training module

The training module “Communicating with patients about COVID-19 vaccination” was developed by the Vaccine-preventable Diseases and Immunization Programme (VPI) of the WHO Regional Office for Europe. VPI designed the module to provide health workers with the knowledge, skills, confidence and resources to recommend COVID-19 vaccination to all eligible patients and to respond to their concerns. It provides a structured approach to starting a conversation about COVID-19 vaccination with patients, and to recognizing and responding appropriately to various positions on the issue (3). The training is delivered online, and takes approximately 180 minutes to complete.

The goal of the training module is to guide health workers to facilitate effective conversations with patients who are eligible for a COVID-19 vaccine and, ultimately, to increase their confidence in vaccination. To accomplish this, it introduces health workers to motivational interviewing skills using scenarios and role-play, aiming to build confidence in patient communication during vaccination consultations (4). Successful training, defined as the appropriate implementation of these motivational interviewing skills, seeks to ensure that patients who are either hesitant or refusing COVID-19 vaccination do not feel pressured to vaccinate but rather assured by health workers that their questions and concerns are being addressed. Essential motivational interviewing skills discussed and practiced in the training include:

- asking open-ended questions
- performing reflective listening
- giving affirmation
- using the elicit-share-verify approach to share expert information
- summarizing the conversation with an intended action (5).

Using the continuum of vaccine acceptance as a conceptual tool (6), health workers are taught to first identify a patient’s position on COVID-19 vaccination (accepting,
hesitating or refusing) and then to follow one of three communication pathways.

In total, 118 health workers recruited from all over Greece took part in the training, which included this evaluation. The training was delivered via an online platform hosted by the Regional Office in collaboration with national health authorities, and co-facilitated by two trainers from VPI.

A new evaluation framework developed by the Behavioural and Cultural Insights (BCI) Unit of the Regional Office was tested for this evaluation, which was carried out jointly by the BCI Unit and VPI. To assess potential broader or indirect outcomes of the training, the evaluation framework includes indicators required for assessing the impact of the intervention alone, as well as an additional three factors – trust, well-being and social cohesion – that are critical for long-term adherence to official recommendations and public health and social measures (7). These factors were selected because they are drivers of behavioural change, are sensitive enough to reflect the current situation in the population, and can be assessed quantitatively through surveys or qualitatively through focus groups and interviews.

Using this new evaluation framework, a theory of change was developed to assess the broader implications of the training (see Fig. 1). The evaluation is underpinned by two theoretical frameworks for impact and process. The assessment of impact used the new evaluation framework developed by the BCI Unit, which relies on contribution analysis (8). This proposes a stage-wise model for evaluating the effectiveness and sustainability of behaviourally and culturally informed interventions in complex settings, with detailed guidance and accompanying tools. It presents the theoretical background, addresses the challenges of assessing causality during times of change and of influencing factors, and provides a method for measuring unintended positive and negative effects of interventions on trust, well-being and social cohesion (9–11). The assessment of the process used the United Kingdom Medical Research Council process evaluation framework, which identifies three components: implementation, mechanisms of impact and context (12).

Fig. 1. Theory of change developed to assess the implications of the training in Greece

<table>
<thead>
<tr>
<th>Problem</th>
<th>Barriers</th>
<th>Drivers (strategies)</th>
<th>Interventions</th>
<th>Outcomes</th>
<th>Outputs</th>
</tr>
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<tbody>
<tr>
<td>Vaccination coverage of the eligible population is suboptimal.</td>
<td>These are unknown, but might include the following:</td>
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<td></td>
<td>• Communication about vaccination is not part of health workers’ training.</td>
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<td>• Many health workers were not experienced in vaccination prior to the COVID-19 pandemic.</td>
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<td>Health workers are the most trusted source when it comes to vaccines and vaccination decision-making.</td>
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<td></td>
<td>Communication strategies such as motivational interviewing have been shown to be effective in moving patients closer to accepting vaccinations.</td>
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<td></td>
<td>Health worker associations are interested in and willing to train health workers in vaccination and related communications.</td>
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<tr>
<td></td>
<td>In partnership with health worker associations, the training on communication with patients about COVID-19 vaccination was organized.</td>
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<tr>
<td></td>
<td>Communication between health workers and patients improved, allowing health workers to more effectively respond to concerns, share knowledge and guide patients towards vaccination acceptance.</td>
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<td>Confidence in vaccines and vaccination increased among patients.</td>
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<td></td>
<td>This had implications for trust, well-being and social cohesion overall.</td>
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</table>
Aims of the evaluation

The evaluation of the training module’s impact and process was undertaken to determine its effectiveness in improving the skills and confidence of participating health workers in communicating with vaccine-eligible patients.

The new framework used for the evaluation is tailored to the pandemic context in that it acknowledges trust, well-being and social cohesion as critical factors for the success of collective actions against COVID-19. While any single activity may be successful in reaching its targets (for example, in changing a specific behaviour), it may have positive or negative effects on trust, well-being or social cohesion for those affected, which means it may have positive or negative implications on the effort to respond to the pandemic as a whole. The success of the training in reaching its own as well as broader targets was considered in this context.

To ensure proper utilization of the evaluation findings, this report is publicly available to Member States and interested parties. A summary of results is showcased on the WHO website where the training materials are found, in addition to being shared with Member States when the training package is explained as an area of technical support.
Health workers identified as prospective participants were informed by email about the training module and its evaluation through the regional health-care authorities and the Panhellenic Association of Pharmacists in April and May 2022.

To evaluate the effectiveness of the training module, changes were tracked in health workers’ self-reported levels of confidence in communicating with patients about COVID-19 vaccination, their use of specific communication skills, and their intention to use the skills taught in the training going forward. A pre- and post-training study design was used to track these changes, and to assess the acceptability and perceived usefulness of the training. All participants were asked to complete a pre-training questionnaire at the beginning of the session and a post-training questionnaire at the end. One month and three months after the training, they were also asked to complete a different questionnaire.

Among the 118 participants, 70 (59.3%) responded to the pre-training questionnaire; 85 (72%) to the questionnaire immediately after training; 62 (52.5%) to the one-month post-training questionnaire; and 42 (35.6%) to the three-month post-training questionnaire. Participants were comprised of 36.8% nurses, 22.1% physicians, 22.1% health visitors and 19% other health workers (pharmacists, midwives, medical laboratory assistants, administrative personnel/health managers). Most participants had extensive professional experience in the field, with 78.6% having over 10 years.

A multi-method approach was employed: the questionnaires addressed to all participants were supplemented by 45 observations of skills used in simulated consultations with patients, and

1 Health visitors in Greece are health promotion specialists particularly involved in promoting and conducting vaccination, patient education and health education in the community. They work mainly in primary care settings, but also in schools, public health service centres and hospitals.
in-depth interviews with 15 health workers. The 15 participants who volunteered to take part in the in-depth interviews were first observed during three simulated consultations with a volunteer playing the role of an unvaccinated person either accepting, hesitating or refusing to be vaccinated against COVID-19. Both in-depth interviews and simulated consultations were performed and recorded online between 30 May and 16 June 2022. The 15 participants consisted of eight physicians, four nurses, two health visitors and one pharmacist from eight different areas in Greece (urban, semi-urban and rural areas, including some of the islands).

The simulated consultations were evaluated by an expert observer/rater and by the person playing the role of a patient. An observation grid was used to observe the communication between each health worker and simulated patient. The observation grid was adapted from the Australian Sharing Knowledge About Immunization (SKAI) package (13) and the Serbian Tailoring Immunization Programmes (TIP) project (14). This approach allowed for comparison of the self-reported questionnaire responses with observed behaviours.

To understand the broader implications of the health workers’ training in and use of the communication skills with patients on trust, well-being and social cohesion, four focus-group discussions were conducted with 22 health workers, comprised of 11 physicians, six nurses, three health visitors, one social worker and one pharmacist from nine different areas in Greece (urban, semi-urban and rural areas, including some of the islands). The focus-group discussions were carried out and recorded online between 15 and 21 June 2022.
Findings

Impact evaluation

The impact evaluation revealed that the training in Greece largely achieved its set objectives. Health workers’ self-reported confidence in their ability to use some of the communication skills was strengthened as a result of their participation. Participants used some communication skills more frequently than others with unvaccinated patients, but declared the intention to continue using the skills and strategies shared in the training as they perceived them to be helpful in communication challenges with patients.

The evaluation revealed that participants felt the training had contributed to building trust with patients, but did not contribute to any change in trust with any other groups such as health authorities. Participants also said that some aspects of well-being and social relations at work were strengthened when applying the new communication skills with patients. These findings suggest that the training may have broader positive implications for health workers that are not confined to patient-health worker interactions specifically.
ONLINE QUESTIONNAIRES
The pre-training and three post-training questionnaires asked how confident participants were in their abilities when communicating with patients about COVID-19 vaccination based on a five-point Likert scale, ranging from 1 = not at all confident to 5 = very confident. For all 11 questions, increases in the mean score of confidence were noted between pre- and immediate post-training responses. Statistically significant increases were found for the following eight tasks:

- talking to patients about the benefits of COVID-19 vaccination;
- talking to patients about the risks of COVID-19 vaccination;
- answering patients’ questions about the safety of COVID-19 vaccines;
- recommending a COVID-19 vaccine when patients are hesitant about the vaccines and/or vaccination;
- answering patients’ questions about the effectiveness of COVID-19 vaccines and vaccination;
- establishing an ongoing dialogue with patients when they decide to delay or decline COVID-19 vaccination;
- providing patients with appropriate information and resources about COVID-19 vaccination and vaccine safety;
- avoiding conflicts with patients who decide to decline COVID-19 vaccination.

Statistically significant increases in confidence between pre- and post-training scores which were maintained one month after the training were observed in the following three tasks:

- answering patients’ questions about the effectiveness of COVID-19 vaccines and vaccination;
- establishing an ongoing dialogue with patients when they decide to delay or decline COVID-19 vaccination; and
- providing patients with appropriate information and resources about COVID-19 vaccination.

The only task that continued to show increased confidence both one month and three months post-training was avoiding conflicts with patients who decide to decline COVID-19 vaccination.

The highest level of confidence in all tasks was found immediately after the training. The decrease in confidence over time, though not falling to pre-training levels, indicates the possible need for additional follow-up training sessions to maintain the achieved outcomes of health workers’ confidence in using the communication skills.
Sharing effective tools for communication –

1. Classification according to the vaccine acceptance continuum and conversation pathways.
   a. Classification according to the vaccine acceptance continuum and conversation pathways
   b. Specific phrases that promote / unblock communication

2. Confirming that difficulties with communication about COVID-19 vaccination are common for health workers

3. Confirming that some communication strategies already being used by participants were correct

4. Shifting participants’ attitudes and expectations related to COVID-19 vaccination communication

5. Contributing to the feeling that, by participating in high-quality training, health workers are giving their best effort to communicating with patients about vaccination

THEME 1 (A): Sharing effective tools for communication –

a. Classification according to the vaccine acceptance continuum and conversation pathways.

The training provides a communication algorithm that describes patient positions on the continuum of vaccine acceptance, from acceptance to hesitancy to refusal, with corresponding conversation pathways to guide health workers through discussions with patients in each of the positions (see Fig. 2). The participants found this algorithm easy to follow, noting that it saved them time and energy, empowered them to make conversation decisions and minimized the likelihood of ineffective responses. It was therefore highly appreciated by most participants and associated with an increase in self-reported confidence in communication.

“Having some guidelines and the relevant knowledge helps me in terms of self-confidence. I can automatically adjust my behaviour to each patient according to the category he/she belongs to. And the truth is that you cannot count only on experience for that. Knowing this algorithm makes it easier to save time and energy.”

– Participant 3, physician
Fig. 2. COVID-19 vaccination communication algorithm for health workers

### 1. IDENTIFY VACCINE HESITANCY
- Start with a statement assuming vaccine acceptance:
  - “You are eligible to receive your COVID-19 vaccine today.”
  - “Now it’s time to receive your COVID-19 vaccine.”
- Listen and determine where patient is on continuum:

<table>
<thead>
<tr>
<th>Accept all</th>
<th>Hesitancy</th>
<th>Refuse all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept but unsure</td>
<td>May accept delay or refuse</td>
<td>Refuse but unsure</td>
</tr>
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</table>

### 2. RESPOND TO PATIENT

**Accept**
- Ask about contraindications and precautions.
- Ask if there are questions.
- Share knowledge: Alert on side effects and pain mitigations.
- Explain the process.

**Vaccinate and Congratulate**

**Review next steps with patient**
- Book appointment for 2nd vaccine right away, send a reminder.
- Explain protective behaviours still necessary post-vaccination to prevent virus transmission.
- Post-vaccination observation for 15-30 mins.

**Hesitant**
- Initiate a conversation guided by MOTIVATIONAL INTERVIEWING techniques:
  1. Ask open-ended questions – Explore main reason behind hesitancy.
  2. Reflect and acknowledge concerns – repeat what the patient says or what you think the patient means to reflect the cause(s) of hesitancy.
  3. Affirm strengths and provide encouragement – recognize strengths to identify common goals.
  4. Elicit, share knowledge, verify – ask what patient knows and seek to complete their knowledge, share evidence tailored to concern verify understanding.
  5. Strongly recommend vaccination and explain why.

**Refuse**
- Do not dismiss, acknowledge.
- Not a debate – explore concerns.
- Share knowledge with permission.
- Give your strong recommendation.
- Share expert information; offer referral to a specialist service or community advocate (if available).
- Inform about risks of vaccine refusal.
- Leave the door open for discussion.

**Recheck intentions to vaccinate**
- Summarize concerns; Decide action

<table>
<thead>
<tr>
<th>Accepts</th>
<th>Still hesitant?</th>
<th>Refuses</th>
</tr>
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</table>

Share expert information; offer referral to a specialist service or community advocate; schedule follow-up for a new discussion.

### 3. END PATIENT CONSULTATION
**THEME 1 (B):**  
**Sharing effective tools for communication—**  
**b. Specific phrases that promote/unblock communication.**  
The training provides sample conversations with common statements that both patients and health workers use in real-life consultations. Participants described this material as very useful, noting that the sample messages for talking about COVID-19 vaccination made them feel more prepared to face challenges in communication with patients, thereby increasing their confidence.

“It was very nice that they gave us the actual words, the ones that the hesitant have used, the ones that we have used. I have printed the dialogues—what you can exactly say in response. As health workers, we may want to say something, we may try hard and not know how to do it. There are little, tiny details. The training gave us these tools, and this has strengthened my confidence.”

– Participant 13, physician

**THEME 2:**  
**Confirming that difficulties with communication about COVID-19 vaccination are common for health workers.**  
Some participants expressed that their confidence grew when they realized they were not the only ones struggling to respond to the concerns of unvaccinated people. The fact that WHO developed a training module on this topic made them feel less isolated, strengthening their sense of belonging to a professional community and sharing challenges.

“It is very important to feel that you are not alone and that you are not the only one struggling. Since a whole training module is developed, many others are probably facing the same difficulties as me. This is psychotherapeutic, and it also helps in strengthening my self-confidence too. It is not that I am not doing my job right—these are common problems for health workers, and I will fight, and I will not be left behind on that.”

– Participant 13, physician
**THEME 3:** Confirming that some communication strategies already being used by participants were correct.

The training strengthened participants’ confidence by presenting techniques that some had already been using instinctively and based on their own experience. This increased participants’ willingness to use these techniques more intentionally and further develop their skills.

“The training has affected me very much. Now, all that I have been doing has been named. For instance, the questions I was asking, I know now that they are ‘open-ended’ questions. This has strengthened my confidence, because I recognize some of the things that I was already doing, and I say to myself, ‘So, I was on the right track.’”

– Participant 7, physician

**THEME 4:** Shifting participants’ attitudes and expectations related to COVID-19 vaccination communication.

The training led some participants to consider revising their attitudes and expectations related to COVID-19 vaccination communication, particularly their sense of failure when patients hesitate or refuse to be vaccinated. Others mentioned that after the training they started to believe it was worth the effort to engage in discussions with patients who were refusing vaccination.

“Personally, I had started to feel ineffective, and I felt that patients had a personal conflict with me. The training helped me understand and deal with the concept, ‘I am available when you are ready.’ We tend to consider hesitancy and denial as a personal attack, and we as health workers were often in a defence position or apologizing, and that’s certainly not good for a health worker. The training helped me realize that it is not a personal attack, it is just the mechanism that someone might develop to avoid vaccination.”

– Participant 8, health visitor
Contributing to the feeling that, by participating in high-quality training, health workers are giving their best effort to communicating with patients about vaccination. Participants expressed that the high-quality training helped them to feel they were doing their best to improve their effectiveness in communicating with patients about COVID-19 vaccination, which strengthened self-reported confidence.

“We pursue the updated information, we want to be informed, we want to help in a more effective way. And I believe that the most effective way can be achieved with proper training. This training module offered the proper training. There are some details, some key details, that can unlock the situation, make the person to finally choose vaccination. If we do our job better, we feel more confident, we feel that we are better. And this feeling is so satisfying. We all want this satisfaction.”

– Participant 10, nurse
Impact on communication skills

**ONLINE QUESTIONNAIRES**
The online questionnaires also asked participants to indicate the frequency with which they use 10 different communication skills when facing patients who have concerns about vaccination, using a six-point Likert scale in which 1 = never, 2 = very rarely, 3 = rarely, 4 = moderately, 5 = frequently, and 6 = extremely. Although in all skills, increases in the frequency of their use were noted between pre- and post-training responses, statistically significant changes (p <0.05) were found in the following three skills that were being maintained both one month and three months post-training:

- use of statements that assume the patient is willing to vaccinate
- recognition of the patient’s strengths and provision of encouragement
- use of the elicit–share–verify approach to address patients’ concern(s).

The skill of summarizing the interaction with the patient only increased in frequency of use with statistical significance in the responses to the three-month post-training questionnaire. All of the other skills (listening to patients’ concerns without interrupting, showing empathy, using open-ended questions to explore patients’ concerns, trying to reflect patients’ concerns, strongly recommending vaccination, asking patients what step they wish to undertake next) were also reportedly used more frequently both one month and three months after the training, although increases in their frequency of use did not reach statistical significance. Participants were mainly experienced health workers and may have already developed some of these skills over the years, thereby limiting their responses regarding increasing frequency and introducing new skills.
IN-DEPTH INTERVIEWS
Many participants stated that they were trying to use all of the communication skills covered in the training in their everyday practice. Participants described access to the training materials as very helpful, as this allowed them to review the theory and practise the skills at their own pace, whenever needed.

“I am trying to incorporate everything that the training gave me in my everyday practice. It needs time, and having the slides means I can read them again and again. I intend to do it daily until I familiarize myself.”
– Participant 5, physician

Some participants had printed the communication algorithm or saved it on their smartphones to help them remember the techniques and familiarize themselves with these skills in clinical practice.

“I have printed this card and I use it as a cheat sheet. I cannot be sure that the quality of my communication is improved; however, it is easier for me to escape from an awkward position and organize my thoughts more effectively. It really helps me on what to ask, what to do.”
– Participant 15, physician

Some health workers identified several skills as particularly useful and noted that they were trying to include them in their approach with patients. Open-ended questions to enquire about patients’ thoughts, beliefs and fears were among the most-often mentioned skills. Other techniques mentioned included reflective listening, giving empathetic responses, congratulating the person who chooses to vaccinate, affirming strengths and providing encouragement, summarizing at the end, and sharing information sources with patients.

“After the training, I started to use open-ended questions. I see that they are very useful. I also try to be more empathetic, to show that I understand what they are going through, to affirm their strengths and provide encouragement, even in refusers – something that I hadn’t been doing before.”
– Participant 3, physician

OBSERVED SIMULATED CONSULTATIONS
As another opportunity to explore the transference of skills from training to practice, 15 participants were observed in simulated consultations with a person playing the role of a patient either accepting, hesitating or refusing to be vaccinated. An expert observer and the person acting as the patient each scored the participant’s communication in the simulated consultation2. Most participants (80%) were observed to have employed most of the skills and strategies

2The Intraclass Correlation Coefficients describing the inter-rater agreement was high for all three categories of simulated consultations (≥0.93, p<0.001), indicating a relevant high inter-rater reliability.
(>50%) in each of the simulated patient positions (accepting, hesitating or refusing). This finding confirms participants’ self-reported use of the communication skills in consultation settings.

The observations revealed which specific communication skills and strategies the participants used most and least. Most relevant were the ways in which participants responded to the simulated patients expressing hesitation about vaccination, and how they guided them through the conversation towards a decision. Most of the skills and strategies were observed to be used by all or nearly all participants (>80%), showing a very high frequency of learned skills translating into practice. The most frequently observed skills and strategies included:

- asking open-ended questions to explore the patient’s concerns
- tailoring questions to the patient’s main concerns
- asking permission to complete the patient’s knowledge regarding their concern
- sharing evidence tailored to the patients’ concerns
- giving their personal recommendation to vaccinate
- explaining why they recommend the vaccine for the patient
- determining a concrete action in collaboration with the patient
- informing the patients that they are welcome back if they have more questions or change their mind.

This high frequency of use of such important skills and strategies among most participants is a notable objective measure that demonstrates the effectiveness of the training in achieving its learning outcomes. The observations were further validated by an adequate level of agreement between the expert observer and the simulated patient regarding the use and effectiveness of the communication skills from the training.

Three skills, however, were observed to be used by less than half of the participants, warranting further attention and possible revisions to the training module to strengthen their adoption:

- using a statement that recognizes the patient’s strengths and provides encouragement
- seeking to verify the patient’s understanding of the evidence shared
- briefly summarizing the interaction.

Participants frequently expressed concern that these communication strategies may prolong consultations with patients, when time is already insufficient. However, the simulated consultations on average lasted only 3.7 minutes for accepting patients, 4.0 minutes for hesitating patients and 4.6 minutes for refusing patients, showing that these conversations actually took a reasonable amount of time for a typical patient consultation. This outcome of the evaluation is a critical message to convey to health workers in the future.
Intention to use the skills taught in the training module

ONLINE QUESTIONNAIRES
Several measures to determine participants’ intentions to use the skills taught in the training were included in the online questionnaires. The training appears to have had an immediate effect on participants’ intention to raise the issue of COVID-19 vaccination with partially or unvaccinated patients in routine consultations, from 70% expressing intention in the pre-training questionnaire to 80% in the post-training questionnaire. However, in the one-month and three-month post-training questionnaires, the percentage of participants expressing this intention returned to 70%. Similarly, the perceived usefulness of the communication strategies learned was very high immediately post-training (93% either agreed or strongly agreed), slightly decreasing three months post-training (83.3%, p=0.048).

The reported usage of the communication strategies increased in the period following the training, from 56.4% declaring that they use the communication skills often or all the time in the one-month post-training questionnaire to 73.8% in the three-month post-training questionnaire. Remaining consistently high across all post-training questionnaires was the percentage of participants reporting the perceived ease of use of the communication strategies when talking with patients (70%).

The post-training changes in some measures may have had to do with participants’ familiarity with and confidence in the new skills and strategies fading over time. More than half of the respondents in both the one-month and three-month post-training questionnaires declared that one training session was not sufficient to learn the skills. Although the duration of the training session was considered sufficient and the topics covered were deemed relevant by the vast majority of participants, there appears to be a need for repeated or refresher trainings. One month after the training, 64.5% of participants requested an additional follow-up session; three months after the training, this had increased to 81%. As time went on, participants appeared to recognize the value of the communication strategies while also feeling a need for more instruction and practice.
IN-DEPTH INTERVIEWS
All interview participants agreed that the skills and strategies taught in the training were both useful and easy to put into practice. Furthermore, all stated that they intended to continue using the skills in the future as they believed doing so can make their work more manageable.

“I certainly intent to use these tools, because they can make my everyday practice easier.”
– Participant 7, physician

Additionally, participants emphasized that using these skills and strategies would be a way for them to give their best effort and become more effective in COVID-19 vaccination communication.

“At the beginning of the vaccination we started with enthusiasm, and being experienced health workers really helped. However, training can complete our efforts. We try to give our best to be more effective in this universal effort. Of course, I intend to continue using these tools in my everyday practice.”
– Participant 10, nurse

Interestingly, many participants emphasized their intention to continue using the skills not only in COVID-19 vaccination communication, but also in communication with patients in general. Some stated that they had also shared the training materials with colleagues to help spread the knowledge.

“The teaching material with the algorithms we received was excellent. I am going to laminate it and share it at work, so that we can all communicate like this with patients.”
– Participant 14, nurse

A few participants raised the concern that one training may not be enough, emphasizing their wish to have repeated trainings to continue to familiarize themselves with the communication skills. They declared that they did intend to continue using these skills or referring to the training materials.
Impact on feelings of trust, well-being and social cohesion

ONLINE QUESTIONNAIRES
While trust in health authorities in Greece did not significantly change by discussing COVID-19 vaccination with patients, there were observed increases in reported well-being and social cohesion in the workplace. Using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree, participants’ perceptions that discussing COVID-19 vaccination with patients had a positive impact on how they felt about their daily work increased from 3.75 in the pre-training questionnaire to 4.24 in the one-month post-training questionnaire and 4.19 in the three-month post-training questionnaire (p=0.001).

Similarly, a significant increase in participants’ perceptions that discussing COVID-19 vaccination with patients was positive for their working relations was observed, from 3.49 in the pre-training questionnaire to 4.08 and 4.07 in the one-month and three-month post-training questionnaires, respectively (p=0.001).

FOCUS-GROUP DISCUSSIONS – IMPACT ON TRUST
In all focus-group discussions, participants agreed that the communication skills and strategies provided in the training will contribute to building trust with their patients. They pointed to the skills of motivational interviewing, which are to be used when patients show concern or hesitancy about vaccination, as well as the other skills and strategies provided in response to patients who either readily accept or express strong refusal.

Participants shared how each of the motivational interviewing skills was highly relevant for building trust. Many noted that they had not thought about encouraging their patients before, but were now practising this skill on a daily basis. Beyond motivational interviewing, participants mentioned the importance of giving a strong recom-
mendation to vaccinate in building trust in COVID-19 vaccination, as it sends a clear message about health workers’ confidence in the vaccines.

In terms of responding to those who refuse vaccination, participants frequently mentioned that the importance of “leaving the door open” for further discussion stood out for them. Many noted that they had not thought of this before, but now considered it vital in building a trusting relationship. Moreover, participants stressed how leaving the door open is a good way to build trust in relationships with all patients, regardless of whether they will finally choose to be vaccinated against COVID-19.

“To be honest, I hadn’t considered earlier leaving the door open . . . Don’t forget that COVID-19 vaccination is not the only condition we have to discuss with our patients. Our patients, even the refusers, must feel comfortable that they can always consult you about all their other problems currently or in the future. They must feel free to discuss even refusing the vaccine, and that no matter what their decision on COVID-19 vaccination will be, they can always return to you and trust you.”

– Focus group 4, physician 8

Some participants also shared that the training reminded them of how much communication matters in their patient encounters and the process of building trust.

“The training reminded me of patient-centred care, and I have started to practise it. I used to talk as a doctor transferring scientific data, while now I am trying to focus on the needs and the perceptions of each patient, using all the communication skills we discussed, like the open-ended questions. In this way, I try to win their trust more and make them realize that I am not only concerned about achieving medical goals, but that I am mainly interested in their own good.”

– Focus group 3, physician 6

FOCUS-GROUP DISCUSSIONS – IMPACT ON WELL-BEING

Participants noted that the training had a positive impact on their well-being at work through improvements in their cooperation with others, especially patients. Feeling better prepared and more confident to deal with any potential conflict or difficult situation by using the new communication skills has helped them feel calmer and more relaxed.

“The truth is that the training helped very much in reducing the tension I felt any time I am confronted with difficult patients, patients that refuse everything I might suggest. So now I try to approach them using open-ended questions, trying to understand what they really think and to highlight their strengths. Using all that, my anxiety has reduced, I feel calmer, and this is so important for me.”

– Focus group 3, physician 6

The training also had a positive impact on health workers’
well-being by helping them feel the effectiveness of their efforts at work, regardless of patients’ decisions about vaccination. While some had previously considered a patient’s decision not to be vaccinated to be a personal failure, the training made them realize that many health workers face the same challenges, and thus they felt less isolated. It also provided them with tools to handle challenging situations with patients in effective ways, which has contributed to the feeling that they can perform well in their role.

“For me, it felt like a personal defeat every time one of my patients decided not to get the COVID-19 vaccine. I was saying to myself that it is my fault, I have done something wrong. The training helped me to realize that I am not alone in this fight, since a whole seminar was organized on that topic means that many health workers share the same challenges. It also gave the structured steps that I can follow even at the end of the consultation by leaving the door open for a future discussion, and following this pathway doesn’t feel like a defeat. It feels more like a confirmation that you are doing a good job.”

– Focus group 4, physician 8

Participants noted that the communication algorithm shared in the training, which provides a structured, predefined pathway for speaking with any patient within a few minutes, has increased their feelings of effectiveness in everyday work. They also expressed that the training has had a positive impact on their well-being by helping them feel more equipped to re-establish relationships with patients after the disruptions and demands of the pandemic.

“These last couple of years with the pandemic were very difficult for [health workers]. We focused on dealing with the emergencies, and connecting with the patients was left behind. We were examining isolated in special rooms, fearing what we were dealing with; all we could see was a virus, and all the patients could see was health workers dressed as astronauts. So now it feels like restarting and learning everything from the beginning – how to approach a patient, how to examine, how to make the relationship work again – because there was a very sudden disruption. And a painful one, to be honest. I meet my patients after two years and they feel like strangers. So, this training made me feel calmer, since it gave me the tools to use in a more organized manner and helped me feel that I am doing a good job with my patients again.”

– Focus group 1, physician 1

Many of the health workers expressed that being provided with patient-centred communication skills has contributed to the sense that they are doing all they possibly can to be effective in their practice.

FOCUS-GROUP DISCUSSIONS – IMPACT ON SOCIAL COHESION
Participants reported feeling more social cohesion at work when using
the new skills with colleagues as well as patients. They mentioned open-ended questions and empathic listening in particular.

“...I have started to use the same communication skills when discussing with my colleagues. Open-ended questions for instance. It is very important when you see someone troubled, in a bad mood although he is usually smiling, to ask what is going on, to listen to him and empower him because you feel that way—not only because he is another link in your work chain, but also because he is a person with whom you have shared so much in the past and you want him to be OK, for you to be OK as well, because something negative is also going to affect you. Therefore, approaching more effectively our colleagues can help us to work more effectively as a team. And this is something that the patient will also feel.”

– Focus group 1, physician 1

Participants pointed out that the new communication skills can also be used to prevent or diffuse conflict in the workplace.

“These are obviously techniques that we can also use with our colleagues. You know, there are conflicts at work, there are difficulties in communications. So, open-ended questions and active listening, even remaining silent sometimes, provide understanding at first about what it is all about and not jumping to conclusions. This has already helped me in my everyday work.”

– Focus group 2, nurse 2

More broadly, participants perceived the training’s patient-centred approach as a way to increase social cohesion in society by bringing health workers and the public together.

“I believe that this more patient-centred approach helps in the direction of social cohesion in the society, since the patients don’t receive the message that they are confronted by health workers who act as authorities, dictating ‘the right thing to do’. In my opinion, this authoritarian approach deteriorates cohesion within the society.”

– Focus group 1, pharmacist 1
Process evaluation

ONLINE QUESTIONNAIRES
In response to the post-training questionnaire, over 80% of participants declared the following learning outcomes of the training to have been entirely met:

• defining vaccine confidence and understanding health workers’ impact on vaccine acceptance;
• understanding vaccine hesitancy among patients and factors that contribute to it in the context of COVID-19;
• learning communication strategies for an effective vaccine conversation with patients; and
• referring to key COVID-19 vaccination resources for health workers.

More than 80% of participants also declared that they were entirely satisfied with the training, and nearly the rest declared that they were partially satisfied. The training module was described most frequently as interesting, useful and user-friendly. However, only 41.2% of the participants expected the training to influence their ability to promote acceptance of COVID-19 vaccination among patients. Nearly all of these participants believed that they could use some or all of the strategies in conversations with patients. For future training sessions, participants declared a strong preference (90.3% one month after the training and 76.2% three months after the training) for an instructor-led version instead of a self-directed training format, expressing their belief that an instructor-led training would be more effective.

IN-DEPTH INTERVIEWS
The analysis of the in-depth interviews confirmed that, overall, the training was highly appreciated by all participants. Participants described the training as well structured and the material as didactic. They also highly appreciated receiving a copy of the course materials upon completion of the training, allowing them to further review and familiarize themselves with the concepts and communication skills. Moreover, participants felt they could share their newly gained knowledge with their colleagues, even suggesting that this module should be part of regular training for health professionals in the country. Many requested updates via future events on communication skills for COVID-19 vaccination or other conditions.
The main limitation of the study was that the evaluation of the training's impact was limited to changes in confidence in communicating with patients and use of skills during training-related exercises as well as impact on feelings of trust, well-being, and social cohesion. The perspectives of recipients of these communication skills, e.g., patients in actual consultation settings are lacking. The volunteer patients’ responses from the simulated consultations were in strong agreement with those of the expert observer, making their evaluation of the participants’ skills still useful. However, observations with real patients in clinical settings, including comparison with a control group, would further validate the effective use of the new communication skills and strategies and could yield additional insight on how the training module can be improved.

Another limitation is that fewer health workers were able to participate in the training and its evaluation than initially planned. This could be attributed to shortcomings in advertising for the training, difficulty making time for the training, fatigue from workload and/or other trainings related to COVID-19, or simply that COVID-19 vaccination had become less of a priority for many health workers at the time of the training.

Participants’ positive responses to this training should be seen in light of the fact that, in Greece, communication skills are not yet a regular component of undergraduate, postgraduate or continuing education for health professionals. Most participants did not have any prior training in communication and highly appreciated this opportunity to learn. A comparison with an evaluation of the same training in other countries could contribute to understanding its impact.

Additionally, though participants were positive in their questionnaire responses about the training, those who agreed to participate in the interviews, focus-group discussions and observations may have been more likely to make efforts to apply these new skills in practice. Their responses regarding the impact of the skills and strategies in their work may have been influenced by their greater interest.
The evaluation of the training module “Communicating with patients about COVID-19 vaccination” demonstrates that it strengthened participants’ confidence in communicating with patients about COVID-19 vaccination, and improved their interactions and behaviours with patients in encounters focused on COVID-19 vaccination as well as other issues. Furthermore, the training indirectly had a positive impact on aspects of trust between providers and patients and among colleagues, as well as on health workers’ well-being in the workplace by reducing feelings of isolation or failure when facing communication challenges with unvaccinated patients.

The evaluation suggests that the training could be improved through more interactivity, localization, scenarios and video examples, and that in-person sessions could improve interaction and enable more role-play. It also shows that access to the training materials is critical, as it allows participants to continue improving their skills after the training and to share their new knowledge with colleagues.

At the time of this report’s publication, VPI had facilitated this training 32 times across 13 countries, including more recently via offline sessions. Additional countries had also facilitated the training on their own. This evaluation provides evidence that the skills shared in the module can transfer effectively from training to practice, increasing health workers’ confidence and improving their behaviours in responding to patients’ concerns regarding vaccination. It also demonstrates that the skills and training material are well received by health workers.

Recognizing opportunities to make improvements, some of which have already been implemented, will help to further strengthen the
training module. Enabling past participants to revisit the content over time may likewise help health workers maintain their confidence and effectiveness in responding to patients’ concerns and needs.

It is well established that health workers play a critical role in health service and policy implementation. They are frequently the human interface between a policy and a patient, and are consistently shown to be the most trusted sources of health information. Lack of support not only leads to burnout, mistrust and social fragmentation among health workers themselves, it ultimately weakens the impact of policies within society as a whole.

Training is often considered a critical element in supporting health workers and strengthening their capacities, but is rarely based on behavioural and cultural insights or evaluated using rigorous methods. Developing training modules informed by behavioural and cultural insights, such as the one described in this report, and evaluating them with a view to learn and improve continuously, are investments in the skills and well-being of health workers as well as in effective policy implementation.


The WHO Regional Office for Europe

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