

International Medical Corps' Approach to Solving COVID-19 Vaccine Hesitancy

Zawar Ali, MD, and Shiromi M. Perera

To promote equity and better ensure outbreak control in low-resource areas, International Medical Corps surveyed people in countries around the world to better understand vaccine hesitancy.

For decades, International Medical Corps has been a key player in providing vaccination to vulnerable and underserved populations worldwide. We deliver vital, routine, and outbreak vaccination to conflict-, disaster-, and disease-affected populations, often in challenging and dangerous contexts.

As an organization focusing on primary healthcare, our healthcare professionals provide routine vaccination against multiple vaccine-preventable diseases (VPDs), including measles, tuberculosis, hepatitis B, flu, tetanus, polio, diphtheria, and pertussis (whooping cough). Our health sector programming supports routine vaccination by integrating it into our primary care services during routine check-ups with infants and toddlers, and through door-to-door community outreach.

In congregate settings, such as internally displaced person (IDP) or refugee camps, we support measles and pneumococcal vaccination under World Health Organization (WHO) guidance. In instances of low uptake of routine vaccinations, we receive support from local ministries of health in conducting mass campaigns. International Medical Corps' vaccination efforts have been crucial in Africa in supporting routine and mass polio vaccination campaigns that ultimately led to the elimination of wild poliovirus from the continent.

During infectious disease outbreaks, where vaccination is a critical outbreak-control strategy, International Medical Corps has been an important global stakeholder in responding to outbreaks including cholera, Ebola and, more recently, COVID-19. During the COVID-19 pandemic, we supported vaccination efforts across 17 countries through logistic and technical support, through managing or supporting vaccine campaigns and the vaccination process, and through water, sanitation and hygiene (WASH) programs and biomedical waste management.

This support has been vital in ensuring outbreak control in low-resource settings.

At the start of 2021, however, with the launch of vaccination in developed countries, we faced the reality of inequitable access to COVID-19 vaccines. The delay in accessing COVID vaccines in resource-poor settings was, according to the director general of the WHO, "a catastrophic moral failure."¹

At International Medical Corps, we understood that this delay and inequity could lead to further vaccine hesitancy in our operational settings. It would be particularly challenging to achieve vaccination targets once vaccines became available. In the past, the lack of equitable access to vaccines has been a problem in humanitarian and resource-poor settings; however, with such a high global demand for COVID-19 vaccines, delay in access could lead to a vicious cycle of hesitancy, low uptake and emergence of new strains.²

UNDERSTANDING VACCINE HESITANCY

Vaccine hesitancy is defined as "a delay in acceptance or refusal of vaccines despite the availability of vaccination services."³ The WHO has recognized it as one of the biggest threats to global health.⁴ Vaccine hesitancy is context-dependent and can change over time. It may be specific to one vaccine at a particular time or to all vaccines.

Communities are heterogeneous groups of individuals with varying degrees of acceptance or hesitancy about specific vaccines, or vaccination in general. When developing strategies to address vaccine hesitancy at a community level, the contextual nature of the problem poses a significant obstacle.

Vaccine hesitancy has long been an obstacle to achieving equitable vaccine coverage. But global efforts to address it are relatively recent. The first consensus definition of vaccine hesitancy was reached in 2014, when the

WHO's SAGE working group on vaccine hesitancy defined it.³ Since then, there has been progress in understanding the drivers of vaccine hesitancy and in addressing them, but operational guidance on mitigating hesitancy at the community level was limited when we started working on COVID-19 vaccination. And guidance on mitigating vaccine hesitancy in vulnerable and marginalized groups was unavailable.

A LOCALLY RESPONSIVE FRAMEWORK FOR A GLOBAL PROBLEM

Keeping in mind the urgency of the issue, the contextual differences inherent to vaccine hesitancy, and the lack of global guidance on the topic, International Medical Corps decided to create a process by which we would have some guiding values and a flexible operational process that adjusts to local conditions.

Through this process, we aimed, through surveys, to understand the nature of hesitancy at the local level. We worked to design interventions to mitigate hesitancy based on the survey results and evaluate these interventions to reach best practices to help vaccination campaigns run effectively in our countries.

For International Medical Corps to achieve the goal of high and equitable COVID-19 vaccine uptake, we would have to better understand the determinants of vaccine hesitancy to design evidence-based interventions and address vaccine delays or refusal in our targeted populations. We developed a detailed framework outlining our goal and various objectives. This framework was adopted from a WHO guidance document on tailoring immunization programs.⁵ We identified two pillars to accomplish our objectives:

Pillar 1. Values and Principles:

1. People-centered
2. Equity-based
3. Participatory
4. Evidence-based
5. Health goal focused

Pillar 2. Phases:

Phase 1: Situational Analysis — Review data and engage stakeholders.

Phase 2: Research — Identify target groups; plan, conduct, and summarize the research.

Phase 3: Design Intervention — Translate research outcomes into interventions, engage stakeholders, and develop monitoring and evaluation plans.

Phase 4: Implementation — Implement, monitor and evaluate, and then adjust or scale up.

The framework that guided International Medical Corps' operational intervention is detailed in Figure 1.

OPERATIONALIZING THE FRAMEWORK

After we created a framework and identified an operational process, we aimed to identify tools that could be adapted to country settings and contextualized. Some vaccine hesitancy scales have been successfully piloted globally; however, none in particular had been developed for resource-poor settings or for an audience whose native language was not English.

The WHO's SAGE working group's list of questions for vaccine hesitancy has been used globally, and we adapted the list for our survey.⁶ The survey was reviewed by country teams and local stakeholders, such as the ministries of health, partner organizations, and civil society organizations (CSOs), for contextualization before finalizing. Also, while the survey was similar across countries, we made minor changes depending on the context. Though we conducted studies in eight countries, this article highlights our work from Afghanistan, Pakistan, and Lebanon.

Along with a standardized survey, we researched certain aspects within some countries. For example, in Lebanon, we were interested in knowing the respective reasons for hesitancy in refugee populations compared to hesitancy among Lebanese nationals. In Pakistan, we wanted to understand the barriers for women associated with access to vaccination.

Similarly, depending on the context, there were areas that we needed to research more because of the historical or cultural context in each setting. To explore these contextual problems, we decided to use qualitative methods, such as in-depth interviews (IDIs) and focus group discussions (FGDs).

We employed random sampling in Afghanistan and Pakistan for our survey. Though this was not possible in Lebanon, the sample size for the survey there was much larger because we had access to a list of beneficiaries.

In Afghanistan, we interviewed 374 respondents (52% female and 48% male), of whom 44.6% had never attended school. In Pakistan, we interviewed 405 respondents (56% female and 44% male), almost half of whom had never attended school. In Lebanon, we interviewed 3,928 respondents (55% female and 45% male); almost half were refugees and the others were Lebanese nationals.

The following results are preliminary; final results are detailed in published articles, as in the case of Lebanon, or currently under review for publication.⁷

WHAT WE LEARNED AND HOW IT HELPED US

Our assessment found contextualized details that helped us better understand vaccine acceptance and hesitancy determinants in Afghanistan, Pakistan, and Lebanon. Some

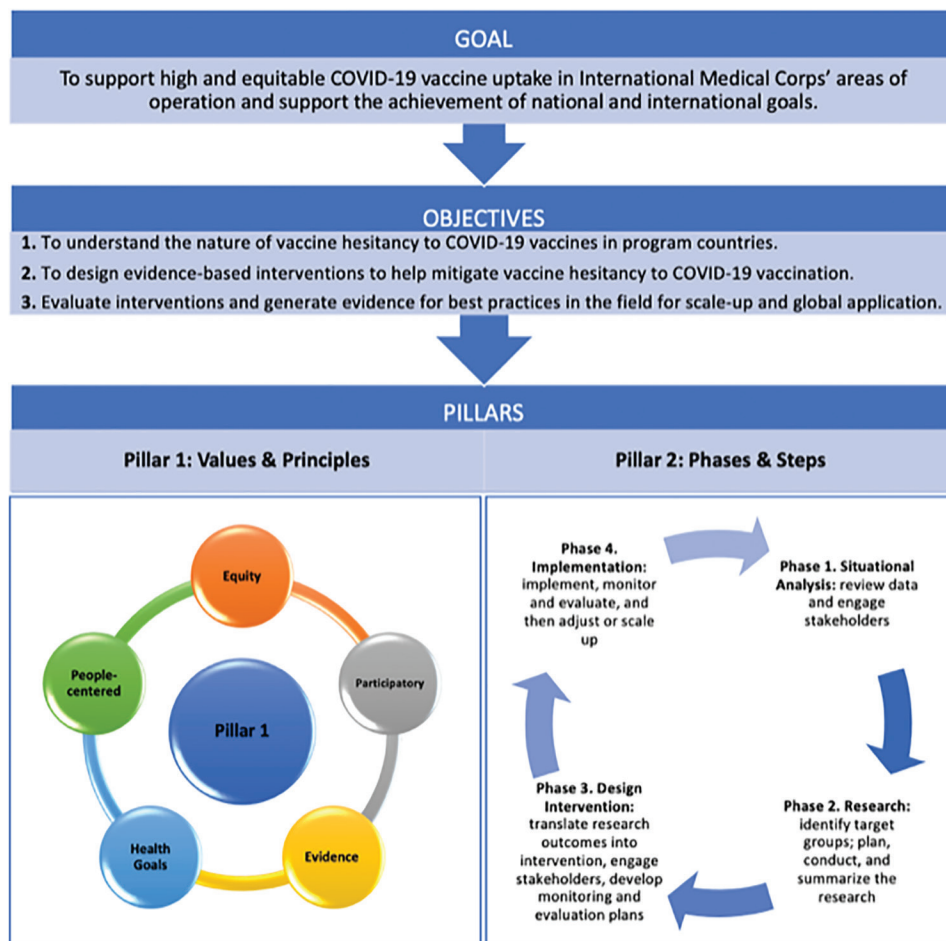


Figure 1. Addressing Vaccine Hesitancy in International Medical Corps' Country Programs Framework

highlights of the nature of hesitancy in these settings and the reasons for them are described below.

Vaccine Acceptance and Hesitancy

Vaccine acceptance and hesitancy varied across each of the countries, with Afghanistan and Pakistan experiencing higher rates of vaccine acceptance and lower vaccine hesitancy compared to Lebanon.

In Afghanistan, of those who had yet to be vaccinated, 82.9% of survey respondents stated they would accept the vaccine if it was made available, while 17.1% were categorized as being vaccine-hesitant (8.9% were unsure, and 8.2% would refuse a vaccine). The very low vaccine hesitancy rate could have been because only 29.6% of respondents followed social media platforms.

In Pakistan, 56% of respondents said they would receive the vaccine if it was available, and 42.5% were categorized as vaccine-hesitant (14.6% were unsure, and 27.9% would

refuse a vaccine). In Lebanon, 24% of respondents said they would receive the vaccine as soon as it was available, and 76% were categorized as vaccine-hesitant (25% were unsure, and 51% would refuse a vaccine).

Barriers to Vaccination

Even if respondents in Afghanistan were interested in being vaccinated, the main constraints experienced by respondents were the unavailability of the COVID-19 vaccine, distance to vaccination points, and lack of information about the vaccine. Concern over the risks and side effects of the vaccine was reported by 58.29% of respondents; interestingly, 71.43% of those reporting concern were male.

In almost all FGDs, participants mentioned that misinformation and negative propaganda caused many people not to take the vaccine. Several FGD participants even stated that a few people in their village died after receiving the vaccine.

In Pakistan, negative rumors and a lack of information regarding COVID-19 vaccines were found to be considerable barriers. The majority of respondents indicated they had little or misleading information about the vaccine, which made them hesitant. Women had received minimal information about COVID-19 vaccines as compared to men. Also, because of cultural obligation, women were required to receive permission from their parents, husbands, or guardian to get the COVID-19 vaccine, even if they were willing to be vaccinated.

In Lebanon, vaccine safety was a primary concern, with only 16% of Lebanese nationals and 15% of refugees believing the vaccine to be safe. The majority of respondents were concerned about the side effects of the vaccine (71% Lebanese nationals vs. 72% of refugees), with 41% of Lebanese nationals and 43% of refugees believing the vaccine side effects were very serious and potentially fatal.

In light of these findings, we provided technical support to ministries of health and to platforms engaged with vaccination. In Lebanon, we piloted a project called Vaccine Champions, in which vaccinated individuals from the refugee community created awareness about the benefits of vaccination and shared their experiences. During our study, we identified a lack of refugee involvement in creating and disseminating vaccination information; our vaccine champion approach helped address that problem.

In Afghanistan and Pakistan, we advised vaccine advocates to talk to male respondents about the importance of vaccinating women in their households because women require the consent of their male relatives to access vaccination and because most of the awareness surfaces in areas such as markets and mosques, where women have limited access. It was important to talk to the male members of the community about vaccination for the whole family.

CONCLUSION

The primary lesson we learned from these studies was when designing a vaccination campaign, it is crucial to create a tailored vaccine hesitancy countering strategy for a program based on the cultural context and other local factors. A generic, one-size-fits-all strategy does not work well for vaccine hesitancy mitigation; it is a problem that is very context-dependent.

From a global perspective, it might be difficult to understand the complexities of vaccine hesitancy in a certain geographic and cultural area. To address this, a flexible approach with room for adjustment at the local level is important. This not only shares new knowledge, but also improves the technical capacity of local program staff to affect positive change in their communities. ■■

REFERENCES

1. WHO Director-General's opening remarks at 148th session of the Executive Board. Accessed September 26, 2022. <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-148th-session-of-the-executive-board>
2. Gudina EK, Mekonnen Z, Yilma D. Vaccine Inequity and Hesitancy: A Vicious Cycle Undermining the Fight Against the COVID-19 Pandemic. *Risk Manag Healthc Policy*. 2022;15:865-869. doi:10.2147/RMHP.S360480
3. MacDonald NE, SAGE Working Group on Vaccine Hesitancy. Vaccine hesitancy: Definition, scope and determinants. *Vaccine*. 2015;33(34):4161-4164. doi:10.1016/j.vaccine.2015.04.036
4. Ten Health Issues WHO Will Tackle This Year. Accessed September 21, 2022. <https://www.who.int/news-room/spotlight/ten-threats-to-global-health-in-2019>
5. WHO E. *Tailoring Immunization Programmes (TIP)*. World Health Organization, Europe; 2019. Accessed February 17, 2023. [https://www.who.int/europe/activities/tailoring-immunization-programmes-\(tip\)](https://www.who.int/europe/activities/tailoring-immunization-programmes-(tip))
6. Larson HJ, Jarrett C, Schulz WS, et al. Measuring Vaccine Hesitancy: The Development of a Survey Tool. *Vaccine*. 2015;33(34):4165-4175. doi:10.1016/j.vaccine.2015.04.037
7. Ali Z, Perera SM, Garbern SC, et al. Variations in COVID-19 Vaccine Attitudes and Acceptance among Refugees and Lebanese Nationals Pre- and Post-Vaccine Rollout in Lebanon. *Vaccines*. 2022;10(9):1533. doi:10.3390/vaccines10091533

DOI: <https://doi.org/10.55834/plj.5301644027>

Copyright © 2023 by American Association for Physician Leadership®



Zawar Ali, MD, MSc, is senior specialist for health, Emergency Response Unit, International Medical Corps, Washington, DC.



Shiromi M. Perera is senior research specialist, Global Technical Unit, International Medical Corps, Washington, DC.