COVID-19 immunization in refugees and migrants: principles and key considerations

Interim guidance

31 August 2021

World Health Organization

Introduction

Although everyone is affected by the COVID-19 pandemic, the impact is not shared equally. This document, which draws on a recent WHO global review of national deployment and vaccination plans and experience from their implementation and the vaccine rollout worldwide plus literature reviews and existing WHO guidance and tools, provides key principles and policy consideration on equitable prioritization and access to COVID-19 vaccines for refugees and migrants.

The document provides information on key challenges and barriers to accessing vaccination services and key considerations in addressing them, as well as good practices. It highlights principles such as global equity for vaccine distribution, national equity and equal respect. It also emphasizes the importance of community engagement and communication to build trust and counter misinformation, fake news and misconceptions, as well as the importance of developing innovative approaches for vaccine delivery. The document is derived from rights and policy and practices and does not offer evidence-based recommendations.

Background

The COVID-19 pandemic has exposed vulnerabilities and exacerbated existing inequalities within and between low- and high-income countries. These inequalities have had the biggest impact on the poorest and most vulnerable people, which may include refugees and migrants (particularly those in irregular situations). These groups often have vulnerabilities that are heightened by this pandemic *(1)*.

Social, political and economic exclusion can result in poverty, homelessness and exploitation, which can create a higher risk of infection with SARS-CoV-2, the virus that causes COVID-19. Refugees and migrants may have to live in close quarters or work in conditions with inadequate protection (such as in overcrowded informal settlements, workers' dormitories, reception and detention centres or insecure housing arrangements) *(2–5)*, with limited ability to physically distance or self-isolate *(6,7)*. Many refugees and migrants work in essential sectors with more exposure to the virus and, consequently, are more vulnerable to infection *(8)*. They may also be more vulnerable because of being outside the dominant population group through factors such as ethnicity, culture, language or race. They may experience poor access to quality health care or have suboptimal health-seeking behaviours, distrust of governments or fear of detention and deportation if seeking health care.

In these contexts, refugees and migrants are more likely to experience a higher burden of COVID-19 infection and be disproportionately represented in cases, hospitalizations and deaths *(8)*. They may also have a high prevalence of underlying health conditions that increase their risk of severe COVID-19 *(9)*.

Studies in several member countries of the Organisation for Economic Co-operation and Development found an infection risk in these groups that was at least twice as high as that for native-born individuals, with a disproportionately negative toll on refugees and migrants (both regular and irregular) in most countries for which data are currently available *(8,10)*.

Hence, it is vital to ensure equitable prioritization and access to health care and COVID-19 vaccines for all groups including refugees and migrants. While States bear the primary responsibility for protecting and promoting the well-being and human rights of those living within their borders, the global community also has an obligation to address the human rights claim to vaccines for all those living in countries who cannot, without assistance, meet their needs. Such actions include reducing the obstacles to obtaining vaccines that confront countries with fewer resources and less geopolitical power. Transmission of COVID-19 knows no borders, and as long as there is active transmission anywhere there will be a risk of transmission everywhere.

The COVID-19 Strategic Preparedness and Response Plan and the Global Humanitarian Response Plan emphasize the need to protect the vulnerable, including those in low-resource, hard-to-reach and humanitarian settings *(11,12)*. United Nations resolution 2565 (2021) calls for strengthened international cooperation to facilitate equitable and affordable access to COVID-19 vaccines in armed conflict and post-conflict situations and during complex humanitarian emergencies *(13)*.

This document builds on existing COVID-19 immunization guidance documents endorsed by the WHO Strategic Advisory Group of Experts on Immunization (SAGE) *(14,15)*; the WHO guidance on developing a national deployment vaccination plan (NDVP) *(16)*; WHO plans to promote the health of refugees and migrants *(17,18)*; and the Global Immunization Agenda 2030 *(19)*. It also draws on evidence and experiences from COVID-19 vaccination programmes in refugee and migrant populations from January to June 2021.

The document targets national authorities, governmental and nongovernmental organizations, health cluster teams, WHO country offices and United Nations country teams that are responsible for managing and supporting deployment, implementation and monitoring of COVID-19 vaccines in refugees and migrants; and partners who provide support.

Methods

The document was developed by the WHO Health and Migration Programme in collaboration with the Departments of Immunization, Vaccines and Biologicals and Health Emergency Interventions and partners. The WHO secretariat reviewed the available NDVPs submitted to the COVAX Facility on the inclusion of refugees and migrants in the COVID-19 vaccination rollout at the country level, and literature related to COVID-19 vaccination in refugees and migrants. This document is also informed by experiences from countries on the implementation of COVID-19 vaccination.

Provision of COVID-19 vaccine for refugees and migrants

Principles

Inclusive vaccine plans and strategies are essential to reduce disease and death burdens of COVID-19. Guiding principles are equitable access to vaccines and that certain target groups at increased risk from COVID-19 should benefit from early vaccination during the period of vaccine supply constraints. The WHO SAGE Values Framework for the Allocation and Prioritization of COVID-19 Vaccination *(14)* provides six core principles that should guide vaccine distribution: human well-being, global equity, reciprocity, equal respect, national equity and legitimacy.

Prioritization of target populations

The WHO SAGE Roadmap for Prioritizing Uses of COVID-19 Vaccines *(15)* recommends that vaccine prioritization within countries under the NVDP must consider the vulnerabilities, risks and needs of groups including refugees and migrant populations who – because of underlying societal, geographical or biomedical factors – are at *significantly higher risk* of severe disease and death from COVID-19. Depending on country context, these groups include disadvantaged or persecuted ethnic, racial, gender and religious groups and sexual minorities; people living with disabilities; people living in extreme poverty; the homeless and those living in informal settlements or urban slums; low-income migrant workers; refugees, asylum-seekers and internally displaced people (IDPs), including vulnerable migrants in irregular situations; nomadic populations; populations in conflict settings or those affected by humanitarian emergencies; and hard-to-reach population groups such as those in rural and remote areas *(15)*.

COVAX and the Humanitarian Buffer

The Gavi COVAX Facility forms a key part of the Access to COVID-19 Tools (ACT) Accelerator to promote global collaboration for accelerating development, production and equitable access to diagnostics, therapeutics and vaccines for COVID-19 *(20–22)*. The goal is to deliver 2 billion doses of safe, effective vaccines to all participating countries by the end of 2021, including to the 92 low- and middle-incomes countries and territories (LMICs) eligible for the COVAX Advance Market Commitment *(23)*.

In the first phase, the goal is to provide vaccine for approximately 20% of each country's population, focusing on health workers and the groups at highest risk of severe disease or death. Further doses will be made available based on availability, financing, country demand, capacity, vulnerability and potential threat of outbreaks.

The COVAX Humanitarian Buffer has been established, as part of the COVAX Facility, as a measure of last resort for populations of concern[1] when other avenues are not available or there are situations not foreseen during the planning and implementation of NDVPs. The Humanitarian Buffer is global in scope and is operated as a demand-driven mechanism, with up to 5% of vaccine doses procured through the COVAX Facility available to cover high-risk populations in humanitarian settings. All COVAX Facility participants, both self-financing and Advance Market Commitment economies and humanitarian agencies, including the United Nations and civil society organizations, will be eligible to apply for doses through the Humanitarian Buffer mechanism *(24)*.

Experience of vaccine rollout and policy response to COVID-19 vaccination in refugees and migrants

Global vaccine equity

As of 30 August 2021, 57.30% of the populations of high-income countries had been vaccinated compared with 2.14% of those in low-income countries *(25)*. To achieve vaccine equity, low-income countries would need to increase their health-care spending by an estimated and hard-to-achieve 56.6%, on average, to cover the costs of vaccinating 70% of their populations *(26)*. For high-income countries, the estimated increase is only 0.8%. The lack of vaccine supplies and financial implications for increasing them have significant impacts on the rollout of COVID-19 vaccine in refugees and asylum seekers since 86% of them live in developing countries *(27)*. Many of these countries also host high number of migrants.

[1] Populations of concern in humanitarian settings may include refugees, asylum seekers, stateless people, IDPs, minorities, populations in conflict settings or those affected by humanitarian emergencies and vulnerable migrants irrespective of their legal status.

Inclusion in NDVPs and vaccine rollouts

From February to March 2021, WHO conducted a review of 104 NDVPs submitted to the COVAX Facility, of which 86 were Advanced Market Commitment (and 16 are self-financing countries and economies). The results indicate that the majority of these NDVPs did not explicitly include migrants (72%). Just over half explicitly included refugees and asylum seekers (53% of 64 countries that have more than 500 refugees). Only 17% of 104 NDVPs explicitly included migrants in irregular situations.

Global efforts for the inclusion of all populations of refugees and migrants in NDVPs and vaccine programme implementation have intensified *(28–30)*, and several countries have responded to calls for vaccine equity by revising and expanding their NDVPs *(31)*. However, international organizations reported that coverage for these populations in the NDVPs and their implementation are far from universal. Refugees and asylum seekers have begun to receive vaccinations in 101 of the 162 countries that the United Nations High Commissioner for Refugees has been monitoring *(31)*. The International Organization for Migration reported in May 2021 that only regular migrants (those who entered a country lawfully and remain in the country in accordance with their admission criteria) were included in vaccination campaigns, while migrants in irregular situations in many countries were not *(32)*.

Barriers to accessing vaccination services and international travel

Some refugees and migrants (particularly migrants in irregular situations) may face multiple barriers to vaccination and health systems access that are relevant to the implementation of COVID-19 vaccine programmes in spite of increasing inclusion of these populations at policy level. These barriers include limited vaccine supply; lack of confidence in vaccine benefits and safety; social influence and norms; lack of trust and practical information about how to obtain vaccines; outreach and language barriers; lack of documentation and complex registration processes, such as via the Internet; and fear of arrest, detention or deportation *(33,34)*. In several countries, operational, administrative and financial barriers (such as identification documents and residence permits) may hamper access to vaccines by migrants *(35)*. Restrictions on international travel may also have a particularly severe impact for these groups as they cannot travel to and from their country of work or origin.

Stigma, exclusion and mistrust, resulting in low vaccine uptake and hesitancy

Some refugees and migrants have had lower levels of routine vaccine uptake and have more distrustful attitudes towards vaccination compared with the general population *(7,36–38)*. There is evidence that these populations may be susceptible to vaccine hesitancy *(39,40)*, which can be addressed with clear, accessible and tailored information campaigns *(41)*. Stigma, discrimination and exclusion, and lack of access to quality health care, represent additional barriers *(40)*, and these factors can exacerbate any mistrust in government and create alienation from public health services.

For example, a recent study in the United Kingdom reported that 72% of the refugees and migrants contacted felt hesitant about accepting a COVID-19 vaccine. Reasons given included concerns over vaccine content, side effects, lack of information or low perceived need. This suggests that hesitancy could be easily addressed with clear, accessible and tailored information campaigns *(41)*.

Lack of financial means and information

The WHO Apart Together study found that not all migrants interviewed would seek medical care in case of suspected COVID-19-infection for a number of reasons, including a lack of financial means, fear of deportation, lack of availability of health-care providers or lack of entitlement to health care. Better programme design will be required to meet their specific needs *(42)*.

A survey in June 2021 of 52 national Red Cross and Red Crescent societies found that 90% reported lack of information or awareness on where and how to access COVID-19 vaccines as a key barrier for migrants, with 67% identifying language barriers *(34)*.

Fears regarding cost, safety and deportation or detention

Other barriers identified include fears over cost of the vaccine, fears of data sharing between the health service and immigration enforcement, lack of information on where to get vaccine and other issues relating to convenience *(41)*. Lack of trust in authorities was a key theme, including concerns around immigration checks or other unwanted questions from health-care providers when people presented for a COVID-19 vaccine *(41)*.

A study among migrant workers in Shanghai found concerns about vaccine safety and effectiveness and a lack of awareness about the vaccine. While over 90% considered COVID-19 vaccination as important, only 75% agreed that the vaccine is safe and 78% that it was effective *(43)*. In Lebanon, an ongoing study about vaccine hesitancy among Syrian refugees has shown that the majority of the sample (66%) reported an intention to receive a COVID-19 vaccine if it is safe and free *(44,45)*. In Qatar, a study found that the residency status of all migrant workers was tied to their employment contracts, so they were more likely to accept the policy of the Government or their employer on COVID-19 vaccinations *(46)*.

Vaccination certificate and international travel

As countries gradually resume or readjust non-essential international travel and introduce risk mitigation measures with the help of digital health certificates, there are growing concerns that these developments may exclude or discriminate against vulnerable populations, including refugees and migrants, who may not be able to access or receive a COVID-19 vaccine or have documented proof of recovery from previous infection *(35)*.

Outreach and other strategies

Several countries are preparing for accelerating and expanding vaccine programme implementation and planning to put in place effective communication campaigns, open more mass vaccination centres and pilot mass vaccination procedures. Outreach measures include pop-up clinics for communities less likely to engage with static sites (such as at homeless shelters); bespoke or targeted clinics at settings of convenience (such as faith settings, community venues, walk-in centres and drive-through facilities); and use of venues such as sexual health clinics *(47)*. Many cities have also provided efficient outreach and low-barrier access through mobile outreach sites (so-called vaccination buses) accessible for all at marketplaces or in areas where many migrants or homeless people live.

Examples of country practices

Across all WHO regions, several good practices have emerged for ensuring the inclusion of refugees and migrants in vaccination and health care for COVID-19. In the WHO Region of the Americas, most countries have included refugees and other displaced people in their vaccination programme implementation. For example, Colombia has provided 10-year temporary protection status to Venezuelan migrants, which would allow them to register for vaccination *(48)*. In the United States of America, no identification is required to receive a vaccine *(49,50)*. Several high-income countries in the WHO European Region have announced that they will vaccinate all people in their territory. Some countries such as the Republic of Moldova and Serbia have delivered vaccines to asylum centres. Most countries in the WHO African and the Eastern Mediterranean Regions have stated that they will include refugees in their vaccination programmes. In Jordan, by late May, 30% of refugees eligible for the COVID-19 vaccine had received at least their first dose *(51)*. Cameroon and Senegal have allowed refugees to register in designated centres near their communities *(31)*. In the South East Asia and Western Pacific Regions, countries including Australia, Bangladesh, Malaysia, Maldives and Thailand have included refugees and migrants in their NDVPs.

Principles and key considerations

Ensure universal and equal access to the COVID-19 vaccine for refugees and migrants regardless of migration status, with access the same as for nationals

- The principle of global equity is to ensure that all countries have fair access to vaccines and to ensure that vaccine allocation takes into account the special epidemic risks and needs of all countries, particularly for LMICs. Although countries bear the primary responsibility for protecting and promoting the well-being and human rights of those living within their borders, it is important that this national concern does not absolve States of obligations to people in other countries *(16)*.
- Governments should ensure that all refugees and migrants are included in their COVID-19 vaccination and other health services programmes *(52)*. Special arrangements should be made for those excluded from health systems, building on existing immunization programmes. This will require a major targeted effort to advocate for and facilitate access to vaccines for these populations alongside host populations. Dedicated financial support/vaccine donations for LMICs by donor countries and international governmental and nongovernmental organizations will also be required.
- In countries where NDVPs are being developed or updated *(16,53)*, it is critical for policy-makers and partners involving in the NDVP development to review the required national and local capacity for implementation, readiness, legal frameworks and regulatory requirements for vaccinating all refugees and migrants regardless of status, including proof of identity requirements *(54,55)*.
- Mechanisms should be established in collaboration with governmental and civil society organizations to monitor COVID-19 vaccination uptake in these populations to ensure that these policies are put into practice *(56,57)*. It is of paramount importance to obtain accurate population estimates to facilitate the allocation of resources, vaccine procurement, deployment planning and to help to estimate vaccination coverage and needs in specific settings *(58)*.
- In line with SAGE recommendations, prioritization of target populations should be done through transparent protocols and procedures that respect human rights for all populations and with the same vaccine quality and efficacy/effectiveness standards applied. Throughout the deployment of COVID-19 vaccines, a gender and human right perspective needs to be incorporated into all activities to ensure maximum success *(16)*.

Addressing barriers that prevent refugees and migrants from accessing COVID-19 vaccination services and international travel

- Health systems must be culturally and linguistically sensitive to the needs of refugees and migrants and the circumstances that may increase their health risks and generate barriers in accessing treatment and care *(59)*. Health-care and administrative staff should be adequately trained in responding to their needs, including for COVID-19 vaccine rollout, and competent to deliver good standards of care to ensure safe immunization practices *(60)*. Furthermore, it is critical to integrate the current workforce needs for urgent COVID-19 vaccine rollout into the broader health system.
- The key stakeholders and health facilities that provide COVID-19 vaccination services for these populations should be identified and mapped, and assessed for readiness, vaccination capacity, policy and protocols. The WHO guidance for COVID-19 vaccine can be used to guide this development process *(16)*.
- Surveillance systems and routine immunization data collection systems should be strengthened or designed to capture data on COVID-19 epidemiology, testing, treatment and vaccination uptake in all refugees, migrant, asylum seeker and IDP populations *(57)*. This would be greatly

facilitated if information on vaccine uptake was disaggregated so that national authorities can see the extent to which different groups are being reached *(61)*.

- In the context of mobility and international travel, WHO recommends that Member States do not require proof of COVID-19 vaccination as a mandatory condition for entry to or exit from a country given the limited (although growing) evidence about the performance of vaccines in reducing transmission and persistent inequities in global vaccine supply.[2] It also advises countries to reduce the current financial burden on international travellers for measures that they must comply with for the protection of public health (testing, isolation/quarantine and vaccination) *(35)*. Banning entry precludes access to territory and asylum procedures for people in need of international protection.

Promoting vaccine uptake and addressing vaccine hesitancy

- The demand for vaccines for refugees and migrants needs to be carefully synchronized with supply availability to ensure that doses are not wasted. Demand should not outstrip a country's ability to administer/deliver the doses it receives and allocates to avoid eroding public trust *(33)*.
- Promoting refugee- and migrant-friendly health systems and implementing policies affirming and protecting human rights and dignity can help to address vaccine hesitancy. Specific strategies to improve trust and counter misinformation and the infodemic of fake news that makes it hard for people to find trustworthy sources and reliable guidance when they need it *(8)* are also required.
- Assessments of barriers to accessing COVID-19 vaccine should be conducted and cover vaccine perceptions**,** potential conflicts due to xenophobia and risks of exclusion. Enablers for effective communication among refugee, migrant and local communities should also be assessed *(33)*. Assessments should be conducted with the full involvement of refugee and migrant populations.
- Innovative tailored and targeted approaches will be needed to reach and engage with refugee and migrant communities that are unconnected with mainstream services or have specific risk factors for under-immunization. Mobile vaccination clinics, pop-up clinics in nonclinical venues, combined health-care services and mass vaccination campaigns may be considered *(16)*. Authorities at national, regional and local levels should work closely and proactively with community-based organizations, migrants' rights organizations and community leaders to identify challenges and devise concrete strategies to address them.
- Firewalls should be put in place to shield migrants in irregular situations from the possible transfer of their personal data to immigration authorities and the risk of facing immigration enforcement measures when they attempt to access health-care services, including COVID-19 immunization *(59)*. Alternative and flexible registration options should include safeguards to ensure that information provided to health-care providers during vaccination is not shared with immigration authorities or used for enforcement. Effective outreach campaigns are needed to highlight the removing of immigration checks for migrants in irregular situations, with specific information on how and where they can access vaccines.
- Research is needed to understand the reasons for under-immunization in these populations and communities, including overcoming individual, social and structural barriers to vaccination, as well as identifying mechanisms for innovative interventions. Engagement with refugees and migrants, particularly those in vulnerable or irregular situations, is essential to understand the realities these communities experience *(33,38)*.

[2] The WHO Director General issued this recommendation to all States Parties to the International Health Regulations (2005) on two occasions, after the sixth and seventh meetings of the IHR Emergency Committee on COVID-19 (15 January and 19 April 2021, respectively).

Engaging communities in COVID-19 vaccination planning and implementation and enhancing effective communication to build trust and counter misinformation

- Engaging and communicating with refugees and migrants requires participatory approaches in order to develop inclusive and acceptable policies and practices for increasing COVID-19 vaccine uptake. These need to be community centred, co-designed with at-risk refugee and migrant communities and distributed through local communication channels using community leaders and peer support *(61)*.
- In humanitarian settings, it is important to enter systematically into new partnerships with humanitarian actors who are already active in missed or under-vaccinated communities and have experience implementing vaccination campaigns *(62)*.
- Clear communication strategies are needed to address both host and refugee and migrant communities to explain the selection of priority groups and why certain groups are not receiving the vaccine. A specific focus is also needed on countering misinformation on COVID-19 vaccines and promoting uptake *(63)*.
- Culturally and linguistically appropriate, accurate, timely and user-friendly information should be provided, including key messages in accessible formats (including mobile or social media systems) at the health facilities providing COVID-19 vaccination for refugees and migrants *(59)*. Local leaders, such as mayors, and community and religious leaders can play a strong role in the development and relaying of messages.

Develop innovative approaches and vaccination strategies for refugees and migrants living in hard-to-reach areas

- National vaccination policies need to adopt innovative measures for hard-to-reach populations living in conflict or in secured areas, and where centralized vaccination policies and implementation strategies may face additional barriers to building trust. Direct engagement of private sector actors, trust mediators, humanitarian actors, national and civil society organizations and community leaders should be considered *(63)*.
- Civil society organizations or other emergency vaccination services may provide immunization services and a paper-based vaccine certificate and ask people if they would like to be registered in national registries. Policy-makers and institutions may agree to include an anonymous code for those who wish not to be registered *(63)*.
- It is critical to strengthen and expand the capacity of health systems, including primary health-care providers and provide health literacy education programmes regarding health services to refugees and migrants. Training to increase awareness among health-care providers prior to vaccination efforts could include simulation exercises. Distribution strategies are needed for hard-to-reach populations and immunization information systems to monitor vaccination coverage. National immunization programmes should be resilient to humanitarian or health crises. Lessons learned from previous campaign and immunization outreach efforts used to reach such populations should be considered in developing strategies.

References

1. Preparedness, prevention, and control of coronavirus disease (COVID-19) for refugees and migrants in non-camp settings. Interim Guidance. Geneva: World Health Organization; 17 April 2020 (https://www.who.int/publications/i/item/preparedness-prevention-and-control-of-coronavirus-disease-(covid-19)-for-refugees-and-migrants-in-non-camp-settings, accessed 24 March 2021).
2. Lewis NM, Friedrichs M, Wagstaff S, Sage K, LaCross N, Bui D et al. Disparities in COVID-19 incidence, hospitalizations, and testing, by area-level deprivation: Utah, March 3–July 9, 2020. MMWR Morb Mortal Wkly Rep. 2020;69:1369–73. doi: http://dx.doi.org/10.15585/mmwr.mm6938a4.
3. Disparities in the risk and outcomes of COVID-19. London: Public Health England; 11 August 2020 (https://www.gov.uk/government/publications/covid-19-review-of-disparities-in-risks-and-outcomes, accessed 24 March 2021).
4. Lassale C, Gaye B, Hamer M, Gale CR, Batty GD. Ethnic disparities in hospitalization for COVID-19 in England: the role of socioeconomic factors, mental health, and inflammatory and pro-inflammatory factors in a community-based cohort study. Brain Behav Immun. 2020;88:44–9. doi: https://doi.org/10.1016/j.bbi.2020.05.074.
5. Kaul P. India's stark inequalities make social distancing much easier for some than others. The Conversation. 2 April 2020 (https://theconversation.com/indias-stark-inequalities-make-social-distancing-much-easier-for-some-than-others-134864, accessed 24 March 2021).
6. Guidance on infection prevention and control of coronavirus disease (COVID-19) in migrant and refugee reception and detention centres in the EU/EEA and the United Kingdom. Stockholm: European Centre for Disease Prevention and Control; 15 June 2020 (Technical report; https://www.ecdc.europa.eu/en/publications-data/covid-19-guidance-prevention-control-migrant-refugee-centres, accessed 12 August 2021).
7. De Vito E, Parente P, de Waure C, Poscia A, Ricciardi W. A review of evidence on equitable delivery, access and utilization of immunization services for migrants and refugees in the WHO European Region. Copenhagen: WHO Regional Office for Europe; 2017 ((Health Evidence Network (HEN) synthesis report 53; https://www.euro.who.int/en/publications/abstracts/review-of-evidence-on-equitable-delivery,-access-and-utilization-of-immunization-services-for-migrants-and-refugees-in-the-who-european-region-a-2017, accessed 12 August 2021).
8. Reducing COVID-19 transmission and strengthening vaccine uptake among migrant populations in the EU/EEA. Stockholm: European Centre for Disease Prevention and Control; 3 June 2021 (https://www.ecdc.europa.eu/sites/default/files/documents/covid-19-reducing-transmission-and-strengthening-vaccine-uptake-in-migrants.pdf, accessed 12 August 2021).
9. Mukumbang FC. Are asylum seekers, refugees and foreign migrants considered in the COVID-19 vaccine discourse? BMJ Glob Health. 2020;5(11):e004085. doi: http://dx.doi.org/10.1136/bmjgh-2020-004085.
10. Hatcher SM, Agnew-Brune C, Anderson M, Zambrano LD, Rose CE, Jim MA et al. COVID-19 among American Indian and Alaska native persons: 23 States, January 31–July 3, 2020. MMWR Morb Mortal Wkly Rep. 2020;69:1166–9. doi: http://dx.doi.org/10.15585/mmwr.mm6934e1.
11. COVID-19 strategic preparedness and response plan (SPRP 2021). Geneva: World Health Organization; 2021 (https://www.who.int/publications/i/item/covid-19-strategic-preparedness-and-response-plan-(sprp-2021), accessed 24 March 2021).
12. Global humanitarian response plan COVID-19. Geneva: United Nations Office for the Coordination of Humanitarian Affairs; 2020 (https://www.unocha.org/sites/unocha/files/Global-Humanitarian-Response-Plan-COVID-19.pdf, accessed 24 March 2021).
13. Resolution 2565 (2021), adopted by the Security Council on 26 February 2021. New York: United Nations; 2021 (https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s_res_2565.pdf, accessed 24 March 2021).

14. WHO SAGE values framework for the allocation and prioritization of COVID-19 vaccination, 14 September 2020. Geneva: World Health Organization; 2020 (https://apps.who.int/iris/handle/10665/334299, accessed 24 March 2021).

15. 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. Geneva: World Health Organization; 16 July 2021 (https://www.who.int/publications/i/item/who-sage-roadmap-for-prioritizing-uses-of-covid-19-vaccines-in-the-context-of-limited-supply, accessed 12 August 2021).

16. Guidance on developing a national deployment and vaccination plan for COVID-19 vaccines. Geneva: World Health Organization; 1 June 2021 (https://www.who.int/publications/i/item/WHO-2019-nCoV-Vaccine-deployment-2021.1-eng, accessed 12 August 2021).

17. Resolution WHA70.15. Promoting the health of refugees and migrants. In: Seventieth World Health Assembly, Geneva, 23–31 May 2017. Geneva: World Health Organization; 2017 (https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/WHA_RES_70.15.pdf, accessed 24 March 2021).

18. Promoting the health of refugees and migrants: draft global action plan 2019–2023. In: Seventy-second World Health Assembly, Geneva, 23 May 2019. Geneva: World Health Organization; 2019 (A72/25; https://apps.who.int/gb/ebwha/pdf_files/WHA72/A72_25-en.pdf, accessed 24 March 2021).

19. Immunization agenda 2030: a global strategy to leave no one behind. Geneva: World Health Organization; 2020 (https://www.who.int/teams/immunization-vaccines-and-biologicals/strategies/ia2030, accessed 24 March 2021).

20. Fair allocation mechanism for COVID-19 vaccines through the COVAX Facility. Geneva: World Health Organization; 2020 (https://www.who.int/publications/m/item/fair-allocation-mechanism-for-covid-19-vaccines-through-the-covax-facility, accessed 24 March 2021).

21. COVAX: Gavi COVAX Facility [website]. Geneva: Gavi, the Vaccine Alliance; 2021 (https://www.gavi.org/covax-facility, accessed 24 March 2021).

22. The access to COVID-19 tools (ACT) accelerator [website]. Geneva: World Health Organization; 2021 (https://www.who.int/initiatives/act-accelerator, accessed 24 March 2021).

23. 92 low- and middle-income economies eligible to get access to COVID-19 vaccines through Gavi COVAX AMC. Geneva: Gavi, the Vaccine Alliance; 30 July 2020 (https://www.gavi.org/news/media-room/92-low-middle-income-economies-eligible-access-covid-19-vaccines-gavi-covax-amc, accessed 24 March 2021).

24. The COVAX humanitarian buffer. Geneva: Inter-Agency Standing Committee; 8 June 2021 (https://interagencystandingcommittee.org/inter-agency-standing-committee/covax-humanitarian-buffer#:~:text=The%20Humanitarian%20Buffer%20is%20a,vulnerable%20populations%20in%20humanitarian%20settings, accessed 12 August 2021).

25. Global dashboard for vaccine equity [website]. New York: United Nations Development Programme; 2021 (https://data.undp.org/vaccine-equity/, accessed 30 August 2021).

26. Jison Yoo K, de Francisco Serpa N, Gordillo-Tobar A. Calculating sub-Saharan Africa's COVID vaccination financing gap. World Bank Blogs. 11 May 2021 (https://blogs.worldbank.org/health/calculating-sub-saharan-africas-covid-vaccination-financing-gap, accessed 12 August 2021).

27. Refugee data finder [online database]. Geneva: United Nations High Commissioner for Refugees; 2021 (https://www.unhcr.org/refugee-statistics/, accessed 12 August 2021).

28. UN Network on Migration statement:striving for equitable access to COVID-19 vaccines to leave no migrant behind. Geneva: International Organization for Migration; 3 March 2021 (https://www.iom.int/news/striving-equitable-access-covid-19-vaccines-leave-no-migrant-behind, accessed 12 August 2021).

29. Policy brief: COVID-19 and people on the move: New York: United Nations Sustainable Development Group; 2020 (https://unsdg.un.org/resources/policy-brief-covid-19-and-people-move, accessed 12 August 2021).

30. Bartovic J, Datta SS, Severoni S, D'Anna V. Ensuring equitable access to vaccines for refugees and migrants during the COVID-19 pandemic. Bull World Health Organ. 2021;99(1):3–3A. doi: 10.2471/BLT.20.267690.

31. UNHCR Global overview: Inclusion of persons of concern in national COVID-19 vaccine roll out. Geneva: United Nations High Commissioner for Refugees; 24 June 2021 (Press release; Microsoft Power BI, accessed 18 August 2021).

32. Migrant inclusion in COVID-19 vaccination campaigns. Geneva: International Organization for Migration; 17 May 2021 (https://www.iom.int/sites/default/files/our_work/DMM/Migration-Health/iom-vaccine-inclusion-mapping-17-may-2021-global.pdf, accessed 12 August 2021).

33. Data for action: achieving high uptake of COVID-19 vaccines. Geneva. World Heatlh Organization; 1 April 2021 (https://www.who.int/publications/i/item/WHO-2019-nCoV-vaccination-demand-planning-2021.1, accessed 12 August 2021).

34. Sight unseen: a vision for effective access to COVID-19 vaccines for migrants, Melbourne: Red Cross Red Crescent Global Migration Lab; June 2021 (https://www.redcross.org.au/getmedia/b82c8ace-2878-4f7e-aad0-4e307dbf1c2f/RCRC-GML-Sight-Unseen-COVID19-Vaccines-FINAL.pdf.aspx, accessed 12 August 2021).

35. Policy considerations for implementing a risk-based approach to international travel in the context of COVID-19, 2 July 2021. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/342235, accessed 12 August 2021).

36. Public health guidance on screening and vaccination for infectious diseases in newly arrived migrants within the EU/EEA. Stockholm: European Centre for Disease Prevention and Control; 2018 (https://www.ecdc.europa.eu/en/publications-data/public-health-guidance-screening-and-vaccination-infectious-diseases-newly, accessed 12 August 2021).

37. Loiacono MM, Mahmud SM, Chit A, van Aalst R, Kwong JC, Mitsakakis N et al. Patient and practice level factors associated with seasonal influenza vaccine uptake among at-risk adults in England, 2011 to 2016: an age-stratified retrospective cohort study. Vaccine X. 2020;4:100054. doi: https://doi.org/10.1016/j.jvacx.2020.100054.

38. Noori T, Hargreaves S, Greenaway C, van der Werf M, Driedger M, Morton RL et al. Strengthening screening for infectious diseases and vaccination among migrants in Europe: what is needed to close the implementation gaps? Travel Med Infect Dis. 2021;39:101715. doi: https://doi.org/10.1016/j.tmaid.2020.101715.

39. Thomas CM, Osterholm MT, Stauffer WM. Critical considerations for COVID-19 vaccination of refugees, immigrants, and migrants. Am J Trop Med Hyg. 2021;104(2):433–5. doi: https://doi.org/10.4269/ajtmh.20-1614.

40. Tankwanchi AS, Jaca A, Larson HJ, Wiysonge CS, Vermund SH. Taking stock of vaccine hesitancy among migrants: a scoping review protocol. BMJ Open. 2020;10(5):e035225. doi: http://dx.doi.org/10.1136/bmjopen-2019-035225.

41. Deal A, Hayward SE, Huda M, Knights F, Crawshaw AF, Carter J et al. Strategies and action points to ensure equitable uptake of COVID-19 vaccinations: a national qualitative interview study to explore the views of undocumented migrants, asylum seekers, and refugees. J Migr Health. 2021;4:100050. doi: https://doi.org/10.1016/j.jmh.2021.100050.

42. Apart Together survey: preliminary overview of refugees and migrants self-reported impact of COVID-19. Geneva: World Health Organization; 2020 (https://www.who.int/publications/i/item/9789240017924, accessed 12 August 2021).

43. Han K, Francis MR, Zhang R, Wang Q, Xia A, Lu L et al. Confidence, acceptance and willingness to pay for the COVID-19 vaccine among migrants in Shanghai, China: a cross-sectional study. Vaccines. 2021; 9(5):443. doi: https://doi.org/10.3390/vaccines9050443.

44. Lebanon: refugees, migrants left behind in vaccine rollout: ensure greater information access. New York: Human Rights Watch; 2021 (https://www.hrw.org/news/2021/04/06/lebanon-refugees-migrants-left-behind-vaccine-rollout, accessed 12 August 2021).

45. El Salibi N, Abdulrahim S, El Haddad M, Bassil S, El Khoury Z, Ghattas H et al. COVID-19 vaccine acceptance in older Syrian refugees: preliminary findings from an ongoing study. medRxiv. 2021. doi: https://doi.org/10.1101/2021.04.25.21256024.

46. Khaled SM, Petcu C, Bader L, Amro I, Al-Hamadi AMH, Al Assi M et al. Prevalence and potential determinants of COVID-19 vaccine hesitancy and resistance in Qatar: results from a nationally representative survey of Qatari nationals and migrants between December 2020 and January 2021. Vaccines. 2021;9(5):471. doi: https://doi.org/10.3390/vaccines9050471.

47. Kain E, Roberts J. Strategy to increase uptake and equity of access to the COVID19 vaccine. Bristol: Public Health England South West Centre; February 2021 (https://www.england.nhs.uk/south/wp-content/uploads/sites/6/2021/04/SW-COVID-Uptake-Strategy-FINAL.pdf, accessed 12 August 2021).

48. Gratton S. Aid groups welcome Colombia move on Venezuelan migrants. The New Humanitarian. 10 February 2021 (https://www.thenewhumanitarian.org/news-feature/2021/2/10/Aid-groups-welcome-Colombia-Venezuelan-migrants, accessed 12 August 2021).

49. COVID-19 vaccines [website]. Wellington: New Zealand Ministry of Health; 2021 (https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-vaccines, accessed 12 August 2021).

50. DHS statement on equal access to COVID-19 vaccines and vaccine distribution sites. Washington (DC): Homeland Security; 1 February 2021 (https://www.dhs.gov/news/2021/02/01/dhs-statement-equal-access-covid-19-vaccines-and-vaccine-distribution-sites, accessed 12 August 2021).

51. A third of refugees eligible for COVID-19 vaccine have been vaccinated in Jordan's refugee camps. Geneva: United Nations High Commissioner for Refugees; 27 May 2021 (https://www.unhcr.org/jo/14917-a%E2%80%AFthird%E2%80%AFof-refugees-eligible-for-covid-19-vaccine-have-been-vaccinated-in-jordans-refugee-camps%E2%80%AF.html, accessed 12 August 2021).

52. Joint guidance note on equitable access to COVID-19 vaccines for all migrants. Geneva: Office of the United Nations High Commissioner for Human Rights; 2021 (https://www.ohchr.org/Documents/Issues/Migration/JointGuidanceNoteCOVID-19-Vaccines-for-Migrants.pdf, accessed 24 March 2021).

53. COVID-19 vaccine delivery support (CDS) programme funding guidelines. Geneva: Gavi, the Vaccine Alliance; 1 July 2021 (https://www.gavi.org/sites/default/files/covid/covax/covax-amc/COVAX-CDS-Programme-Funding-Guideline.pdf, accessed 12 August 2021).

54. COVID-19 vaccine introduction readiness assessment tool, 21 September 2020. Geneva: World Health Organization; 2020 (https://apps.who.int/iris/handle/10665/336188, accessed 12 August 2021).

55. COVID-19 vaccine introduction readiness assessment tool (VIRAT) for UNHCR operations. Geneva: United Nations High Commissioner for Refugees; February 2021 (https://www.unhcr.org/health/UNHCR-Vaccine-Introduction-Readiness-Assessment.xlsx, accessed 12 August 2021).

56. Action checklist, Pillar 10, vaccine key action. Geneva: World Health Organization; 10 March 2021 (https://covid19partnersplatform.who.int/en/action-checklist, accessed 12 August 2021).

57. Monitoring COVID-19 vaccination: considerations for the collection and use of vaccination data, interim guidance, 3 March 2021. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/339993, accessed 12 August 2021).

58. Acceptance and demand for COVID-19 vaccines: interim guidance. Geneva: World Health Organization; 31 January 2021 (https://www.who.int/publications/i/item/WHO-2019-nCoV-vaccination-demand_planning-tool-2021.1, accessed 12 August 2021).

59. Enhancing access to services for migrants in the context of COVID-19 preparedness, prevention and beyond. Geneva: UN Network on Migration; 11 June 2020 (Policy brief; https://reliefweb.int/report/world/enhancing-access-services-migrants-context-covid-19-preparedness-prevention-and, accessed 24 March 2021).

60. COVID-19 vaccine introduction toolkit. Geneva: World Health Organization; 2021 (https://www.who.int/tools/covid-19-vaccine-introduction-toolkit, accessed 24 March 2021).

61. Conducting community engagement for COVID-19 vaccines: interim guidance, Geneva: World Health Organization; 31 January 2021 (https://apps.who.int/iris/handle/10665/339451, accessed 12 August 2021).

62. 10 steps to community readiness: what countries should do to prepare communities for a COVID-19 vaccine, treatment or new test. Geneva: World Health Organization; 8 February 2021 (https://www.who.int/publications/i/item/who-2019-nCoV-Community_Readiness-2021.1, accessed 24 March 2021).

63. GHC position paper: COVID-19 vaccination in humanitarian settings: 12 key messages for advocacy. Geneva: Global Health Cluster; 7 May 2021 (https://healthcluster.who.int/publications/m/item/covid-19-task-team-covid-19-vaccination-in-humanitarian-settings, accessed 12 August 2021).

Acknowledgements

This document was developed by the WHO Health and Migration Programme team: Kanokporn Kaojaroen, Richard Alderslade, Mohammad Darwish, Cetin Dikmen, Rifat Hossain, Alexandra Ladak, Palmira Immordino, under the strategic lead and supervision of Santino Severoni and in close collaboration with the Departments of Immunization, Vaccines and Biologicals; and Health Emergency Interventions.

The contributions of the following colleagues and partner organizations who provided contents for specific subsections or peer-reviewed earlier drafts of the document are gratefully acknowledged.

WHO: Ali Ardalan, Lin Aung, Josef Bartovic, Rajendra Bohara, Ado Bwaka, Diana Chang Blanc, Balwinder Singh Chawla, Ana Chevez, Rudi Coninx, Ernest Dabire, Siddhartha Datta, Shalini Desai, Lokombe Elongo, Ann Fortin, Quamrul Hasan, Aarti Garg, Santosh Gurung, Adelheid Marchang, Lisa Menning, Aree Moungsookjareou, Eba Al-muna Pasha, William Perea, Sohel Saikat, Messeret Shibeshi, Elizabeth Waagensen, Jos Vandelaer, Teresa Zakaria and Sandile Zibwowa.

External partners: Karl Blanchet (Geneva Centre for Humanitarian Studies), Namseon Beck (Medair), Ann Burton and Nasur Muwonge (United Nations High Commissioner for Refugees), Kevin Clarke and Reena Doshi (United States Centers for Disease Control and Prevention), Laura Craw, Talha Jalal and Robert Kanwagi (GAVI), Jerome Elie and Mirela Shuteriqi (International Council of Voluntary Agencies), Poonam Dhavan, Mireille Lembwadio and Alice Wimmer (International Organization for Migration), Eric Friedman and Lawrence Gostin (George Town University), Sally Hargreaves (Saint George University), Nicole Hoagland (International Federation of Red Cross and Red Crescent Societies), Evan Jones (Asia Displacement Solutions), Daniela Knoppik, Verena Venus and Ahmadu Yakubu (United Nations Children's Fund), Natalia Korobkova (World Vision International), Stephanie Loose (UN Habitat), Raphael Marcus (HIAS, the Hebrew Immigrant Aid Society), Michael Kent Ranson (World Bank), Alyna Smith (PICUM), Paul Spiegel (Johns Hopkins University) and Paul Tacon (International Labour Organization).

WHO continues to monitor the situation closely for any changes that may affect this document. Should any factors change, WHO will issue a further update. Otherwise, this document will expire two years after the date of publication.

WHO reference number: WHO/2019-nCoV/immunization/refugees_and_migrants/2021.1