Immunization in the context of COVID-19 pandemic

Frequently Asked Questions (FAQ)

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These FAQs accompany WHO's **Guiding principles for immunization activities during the COVID-19 pandemic.**[1] As the COVID-19 pandemic evolves, these FAQ will be revised as necessary,

Immunizations are an essential health service that protect susceptible individuals from vaccine-preventable diseases (VPD).[2] By providing timely immunizations, individuals and communities remain protected and the likelihood of a VPD outbreak decreases, Preventing a VPD outbreak not only saves lives but requires fewer resources than responding to the outbreak and helps reduce burden on a health system already strained by the COVID-19 pandemic, While committing to sustaining immunization systems, countries should use approaches that respect the principle of do-no-harm and limit transmission of COVID-19 while providing immunization activities, Immunization visits can also be used as opportunities to disseminate messages to encourage behaviours to reduce transmission risk of the COVID-19 virus, to identify signs and symptoms of COVID-19 disease, and to provide guidance on what to do if symptoms emerge,

Immunization services

1. Should newborn vaccination programmes continue as planned during the COVID-19 pandemic?

Yes, Given that institutional deliveries should be maintained in most situations, newborn vaccination (*e.g.* BCG, OPV, Hepatitis B) should remain a priority and vaccines given according to national immunization schedules.

2. Is adult vaccination recommended during the COVID-19 pandemic?

Countries with existing pneumococcal, influenza, or pertussis vaccination programmes for older adults and individuals with high-risk conditions should maintain those programs while implementing measures to avoid the spread of COVID-19, especially for those at higher risk of severe disease such as older adults, Preventing respiratory illness and hospitalization from pneumococcus, influenza, and pertussis through vaccination will allow respiratory medical equipment, medications, and health care workers to be more available to support patients with COVID-19, While there is currently limited information on whether COVID-19 is associated with an increased risk of pneumococcal infection, pneumococcal vaccination can prevent both primary and secondary bacterial infections and the unnecessary use of antibacterial medications (antibiotics),

3. Should school-based vaccination be continued as planned during the COVID-19 pandemic?

School-based vaccination initiatives should continue only if infection prevention and control measures are implemented to avoid increased risk of transmission of the COVID-19 virus among the students, school personnel and health care providers, School-based delivery is an important mode of vaccine delivery for children and adolescents against several vaccines such as booster doses of tetanus and diphtheria, measles-rubella vaccines, HPV vaccine, meningococcal vaccines, and typhoid conjugate vaccines,

However, when mass vaccination campaigns are under temporary suspension, school-based campaign strategies are to be avoided; alternative means should be sought to reach these school-aged children with the age-appropriate vaccines,

[1] Guiding principles for immunization activities during the COVID-19 pandemic, https://apps.who.int/iris/bitstream/handle/10665/331590/WHO-2019-nCoV-immunization_services-2020.1-eng.pdf

[2] COVID-19: Strategic Planning and Operational Guidance for Maintaining Essential Health Services During an Outbreak, 20 March 2020. https://www.who.int/publications-detail/covid-19-operational-guidance-for-maintaining-essential-health-services-during-an-outbreak

4. Are there measures that countries can take to protect immunization providers from the COVID-19 virus? [3]

Yes, Countries can follow recommended guidance on the Rational use of personal protective equipment for coronavirus disease (COVID-19) and considerations during severe shortages,[4] Advice on the use of masks in the context of COVID-19,[5] and encourage immunization providers to perform hand hygiene frequently as outlined in My 5 Moments for Hand Hygiene.[6] The vaccination sessions should be conducted in well-ventilated areas and the areas should be disinfected often.

5. Are there ways to organize the immunization service site to minimize the risk of COVID-19 virus transmission?

Yes. There are a range of simple steps that can be taken to protect vaccinees and caretakers from COVID-19 exposure, such as limiting the number of individuals present at an immunization visit and holding smaller sessions at more frequent intervals, Strategies to avoid crowded waiting rooms could include:

- Organising scheduled times for immunization appointments;
- Bundling immunization activities with other essential preventive health services, as appropriate for age, to limit the number of visits made to the health centre by vaccinees and their caregivers;
- Use of outdoor spaces, if possible, and adherence to physical distancing at the health care facility or site;
- Establishing immunization sessions exclusively for vaccination of older persons and those with pre-existing medical conditions (such as high blood pressure, heart disease, respiratory illness, or diabetes).

Whenever possible, immunization services and waiting areas should be separated from curative services (i.e, separate times of the day or separate spaces depending on the facility).

6. Can a person with COVID-19 (confirmed or suspected) infection be vaccinated?

Yes, Today, there are no known medical contraindications to vaccinating persons who have COVID-19.

To minimize risk of COVID-19 transmission, individuals with suspected or confirmed COVID-19 should be isolated and cared for according to WHO guidance.[7]

If a person with confirmed or suspected COVID-19 is not in a health care facility (*e.g.* at home), the act of seeking immunization may increase spreading infection to others, For that reason, this individual should defer vaccination until symptoms resolve, preferably following two consecutive tests negative for COVID-19 (conducted 24 hours apart).[8] If testing is not feasible, WHO recommends deferring vaccination for 14 days *after symptom resolution*.

If a person with confirmed or suspected COVID-19 is under care in a health care facility (*e.g.* inpatient) this individual should be vaccinated according to the national immunization schedule upon recovery and prior to discharge, assuming appropriate infection prevention and control measures are respected.

The duration of viral shedding and transmissibility of COVID-19 is not yet well understood, As these studies become available, this guidance will be updated,

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[3] Critical preparedness, readiness and response actions for COVID-19. https://apps.who.int/iris/bitstream/handle/10665/331498/WHO-2019-nCoV-IPCPPE_use-2020.2-eng.pdf

[4] Rational use of personal protective equipment for coronavirus disease (COVID-19) and considerations during severe shortages. https://apps.who.int/iris/bitstream/handle/10665/331695/WHO-2019-nCov-IPC_PPE_use-2020.3-eng.pdf

[5] Advice on the use of masks in the context of COVID-19. https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-(2019-ncov)-outbreak

[6] WHO guidelines on hand hygiene in health care, https://www.who.int/infection-prevention/publications/hand-hygiene-2009/en/

[7] Coronavirus disease (COVID-19) technical guidance: Patient management. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/patient-management

[8] Considerations in the investigation of cases and clusters of COVID-19. https://www.who.int/publications-detail/considerations-in-the-investigation-of-cases-and-clusters-of-covid-19

7. Can a person exposed to a COVID-19 case be vaccinated (a contact)?

Yes, Today, there are no known medical contraindications to vaccinating persons who have COVID-19,

If a person exposed to a COVID-19 case is not in a health facility (e.g. home), this individual should first complete 14 days of self-isolation to prevent risk of COVID-19 virus transmission to others, If the contact does not develop symptoms of COVID-19 after 14 days of self-isolation, then this person can be vaccinated,

If a person exposed to a COVID-19 case is under care in a health care facility (e.g. inpatient) this individual should be vaccinated according to the national immunization schedule upon recovery and prior to discharge, assuming appropriate infection prevention and control measures are respected.

8. If immunization services are suspended or reduced, will countries need to conduct catch-up immunization activities?

Yes, Even if routine services have continued throughout the COVID-19 pandemic, service delivery may have been sub-optimal, or beneficiaries may not have been able or willing to access services, Therefore, intensification of immunization services and demand generation activities will be a priority,

Strategic planning of catch-up vaccination activities should begin during the time of suspension of immunization activities, and not wait for their resumption, Review of vaccine registers, defaulter listings and newborn tracking should be continuously updated during the time of suspended or reduced immunization activity and used for catch-up planning, Strategies for catch-up may should be based on local epidemiology of outbreak-prone VPDs such as measles, polio, diphtheria, pertussis, meningococcus, and yellow fever; activities could include additional outreach and/or mobile sessions or the conduct of periodic intensification of routine immunization services (PIRIs).[9]

National Immunization Technical Advisory Committees should be engaged to advise the Ministry of Health if recommendations for modified catch up policies (e.g. adjusting policies to extend age eligibility) or revised immunization schedules (e.g, minimum interval between doses of vaccine) can facilitate catch-up activities.[10]

9. During the COVID-19 pandemic, are there activities that can be undertaken to preserve community acceptance of vaccines?

Yes, Sustaining trust in vaccination and the health system is essential, Any changes to the operations of immunization services following the COVID-19 pandemic must be clearly communicated to the health workforce and the community. To sustain community demand for vaccination services, a tailored communication strategy should be implemented to provide accurate health information, address community concerns, enhance community linkages and encourage continued use of immunization services,

Health workers should be provided training to develop skills on infection prevention and control, but also to enhance their ability to communicate key messages to caregivers and communities on vaccination as a priority health service during COVID-19, the risks of VPDs and the benefits of vaccination.

Community engagement should involve local leaders in planning of catch-up activities to support their role in advocating for vaccination, to inform communities of services being resumed, and to emphasize the importance of vaccination and catching up missed vaccinations. To guide tailored strategies for catch-up activities, it will be crucial for countries monitor possible barriers to vaccination among the public and vulnerable groups.

10. If immunization services are suspended or reduced, what should be communicated to concerned parents who are worried about their children missing vaccine doses?

Parents can be informed that although it is important to provide timely vaccinations, there is also a need to follow guidance by national and local governments on COVID-19 preventive measures, including physical distancing. This means that there may be temporary interruption of vaccination services. In these instances, it will be important to advise

[9] Periodic Intensification of Routine Immunization, https://www.who.int/immunization/programmes_systems/policies_strategies/piri_020909.pdf

[10] WHO. Table 3: Recommendations* for Interrupted or Delayed Routine Immunization - Summary of WHO Position Papers, https://www.who.int/immunization/policy/Immunization_routine_table3.pdf

parents to seek immunization for children as soon as vaccination services resume. Parents should also be reassured that as soon as vaccination services are again available they will be informed about how to catch up the missed doses,

11. If immunization services are suspended, when can immunization activities resume?

Countries will need to reinstate and reinvigorate immunization services at the earliest possible time. Suspended immunization services should resume as soon as the risk of COVID-19 transmission is reduced and the health system capacity is capable to resume immunization services. It is likely that there will still be some risk of COVID-19 transmission when services resume. Stricter infection prevention and control measures and physical distancing practices for waiting areas will still be needed in the initial phases of reinstating immunization services,

In preparation for the reinstatement of services, a communication strategy should be developed and implemented at the appropriate time; this strategy should adequately inform and prepare health workers, clearly announce the reinstatement of immunization services, and encourage the public to seek vaccination.

Vaccine-preventable disease surveillance

12. Should surveillance for VPDs continue during the COVID-19 pandemic?

Yes. Surveillance systems should continue to enable early detection and management of VPDs, at a minimum for diseases with global surveillance mandates and elimination and eradication goals: polio, measles, neonatal tetanus, and, in countries with regional elimination goals, rubella. Countries should also prioritize surveillance for VPDs with epidemic potential: influenza, meningococcus, yellow fever, typhoid, cholera, and diphtheria.[11] Ongoing surveillance for other VPDs should continue as much as possible,

13. What changes to VPD surveillance are recommended if the COVID-19 pandemic does not allow for existing VPD surveillance systems to continue as normal?

If existing VPD surveillance systems cannot continue as normal, critical functions should be identified and maintained, such as active surveillance for acute flaccid paralysis cases, polio environmental surveillance, surveillance for outbreaks, and shipment of urgent specimens and laboratory confirmation of priority VPDs. To decrease the risk of exposure to COVID-19, active surveillance for VPDs such as polio can continue at a limited number of priority hospitals, as long as the surveillance officer wears appropriate personal protective equipment (PPE). If this is not possible, active surveillance should be done remotely (e.g. by internet, phone) as much as possible.[12]

14. How can continuity of laboratory-based surveillance for VPDs be ensured?

Many VPD laboratories are becoming involved in testing for the virus that causes COVID-19. If COVID-19 becomes a priority for laboratory testing, VPD samples should be tested only if there is assurance that it does not compromise testing capacity for COVID-19 due to limited availability of reagents and limited capacity for international transportation.

Countries are encouraged to retain a sufficient level of capacity to test for VPDs, albeit potentially with decreased frequency of testing for VPDs. When laboratory testing is not possible, specimens should be stored appropriately for confirmation when laboratory capacity allows. Countries should ensure enough storage capacity at provincial and central level and monitor it on a regular basis. Laboratory testing algorithms may need to be adjusted to meet the demand for laboratory confirmation. Specifically for potential measles outbreaks, new clusters can be confirmed by testing five to ten suspect measles cases,

[11] WHO Vaccine Preventable Diseases Surveillance Standards, https://www.who.int/immunization/monitoring_surveillance/burden/vpd/standards/en/.
[12] Interim guidance for the polio surveillance network in the context of Coronavirus (COVID-19). http://polioeradication.org/wp-content/uploads/2020/04/Interim-Guidance-Polio-Surveillance-in-the-context-of-COVID19.pdf

15. How can COVID-19 surveillance be integrated with existing VPD surveillance?

Whenever possible, comprehensive VPD surveillance systems should be integrated with surveillance systems for COVID-19, taking advantage of shared infrastructure for laboratory capacity, data management systems, specimen transportation, and reporting, Integration with COVID-19 laboratory surveillance is possible for specimen collection, transportation and processing (which is similar to influenza and measles) and testing platforms, and protocols (which are mostly PCR-based, using the same RNA extraction kits and enzymes).

16. Should community-based surveillance be continued?

Community-based surveillance (CBS) is strongly discouraged as it involves in-person visits or group sensitization, However, when (CBS) for polio is ongoing, persons conducting such surveillance should still be encouraged to report acute flaccid paralysis cases and potential outbreaks and call patients to encourage them to go to the nearest hospital, CBS for neonatal tetanus, if possible, can be conducted remotely. WHO does not recommend CBS for other VPDs.

Cold chain and supplies

17. What can be done to prevent vaccine stock out during and after the COVID-19 pandemic period?

Global vaccine production is being disrupted, leading to delays in vaccine shipments to countries. To anticipate any possible disruptions in supply, vaccine availability should be ensured for at least three months at national level. If this is not possible, vaccine availability should be ensured at sub-national level for three months, if storage capacity exists. Otherwise, consider shipping vaccines to the sub-national level more frequently, e.g. monthly or depending on previous stock level.

18. What actions can be taken to ensure availability of vaccines and related supplies for routine immunization programme at all levels?

Countries should make rational forecasting of vaccines and ancillary items, based on anticipated consumption from routine immunization services and campaigns, Countries should reinforce the vaccine stock monitoring system to ensure that all antigens and diluents are sufficiently available and potent based on expiry date and vaccine vial monitor status. It is also important to a) closely monitor the stock levels for ancillaries (syringes and safety boxes) as they may be used for therapeutic purposes in times of shortage, b) ensure vaccine deliveries include adequate safety stock levels, c) respect the bundling of vaccines and related commodities, and d) coordinate with concerned agencies to ensure loading of vaccines whenever flights and shipments are reinstated.

19. Can COVID-19 test kits, reagents and lab supplies be stored in vaccine cold chain?

Yes, It is permissible to use the EPI cold chain for the storage of appropriate temperature-sensitive pharmaceuticals, which would include COVID-19 laboratory supplies, as long as they are properly labelled, In such circumstances, cold chain or supply officers should first ensure that there is adequate cold chain capacity and allocate a temporary space for such laboratory products, clearly labelled and distinct from vaccines.

20. How can countries assess their cold chain system surge capacity?

Countries should update and maintain a list of all facilities (public and/or private) with functional cold chain equipment to ensure surge capacity (e.g. the ability of the cold chain system to store sudden influx of temperature-sensitive products). Any latest assessments can be used as a data source to determine existing capacity, such as the WHO-UNICEF Effective Vaccine Management (EVM) assessment, the Gavi Cold Chain Equipment Optimization Platform (CCEOP), or other cold chain mapping exercises. In the absence of these, a rapid assessment should be conducted to ensure compliance with vaccine storage temperature requirements.

21. Are there ways to minimize burden on the cold chain storage during the COVID-19 pandemic?

Yes, Countries can modify vaccine receipt and distribution schedules where required to avoid excess burden on the cold chain. When appropriate, vaccines that were previously allocated for mass vaccination campaigns could be used for

routine immunization. Programmes should systematically check with supplier(s) regarding vaccine supply availability and the shipment schedules; budget availability and fund allocation should be aligned with this revised supply schedule.

Miscellaneous

22. Should other activities such as immunization trainings and coverage surveys continue?

Activities that facilitate immunization programmes should be carefully considered against the risk of further aggravating transmission of COVID-19, In-person trainings, which congregate groups of people should be temporarily suspended when they are not compliant with physical distancing recommendations, Existing digital health platforms may be leveraged for training, information access, and dialogue with the communities who seek immunization services, Such platforms may help refer families to appropriate sources of health information or other social services,

23. Should new vaccine introductions continue?

Planned new vaccine introductions should be carefully reconsidered and perhaps postponed, New vaccine introductions typically include a launch that would not comply with physical distancing recommendations, Furthermore, health care capacity will likely be diverted toward COVID-19 and community demand too low to permit a successful new vaccine introduction launch.

24. Should verification exercises of measles-rubella elimination continue during the COVID-19 pandemic?

This depends on the local context, Measles rubella elimination verification activities could continue during the COVID-19 outbreak but should be aligned with the country response capacity to COVID-19, or otherwise postponed, Any delayed measles-rubella verification activities should be included in the post-COVID-19 recovery plans.

25. Should MNTE assessments continue during the COVID-19 pandemic (e.g., pre-validation assessments, validation surveys and post-validation assessments)?

No, Given the intense engagement and personal interactions required during these assessments, particularly between communities and assessment teams, these exercises should be postponed and resumed once physical distancing restrictions have been lifted.

26. Are there vaccines that are recommended for health care workers in the context of COVID-19?

Yes, Since there may be other vaccine preventable diseases, such as influenza and measles, circulating in a country along with COVID-19, all health care workers should receive vaccines according to their national schedule.[13]

27. Is there a vaccine against COVID-19?

As of the date of these FAQs, there over 70 vaccine candidates under development and the first clinical trial with an experimental vaccine began in March 2020. It is the first time in history that only 60 days passed between genome sequencing of the virus and the accelerated development of the vaccine. However, WHO does not expect to have a safe, effective vaccine available against COVID-19 earlier than 18 months from the issuance of these FAQs.

WHO reference number: WHO/2019-nCoV/immunization_services/FAQ/2020.1

[13] WHO recommended vaccines for health care workers https://www.who.int/immunization/policy/Immunization_routine_table4.pdf