

Clinical management of COVID-19

December 2024

Key points

- Establishing and sustaining clear pathways to clinical care remains a critical element of the response to COVID-19.
- As per the WHO Director-General's standing recommendations, countries are encouraged to deliver optimal clinical care for COVID-19, appropriately integrated into all levels of health service, including access to proven treatments. Individuals who test positive for SARS-CoV-2 should be immediately linked to a clinical care pathway.
- Countries should adapt COVID-19 clinical care pathways for women who are pregnant or breastfeeding and children.
- Countries are encouraged to provide access to follow-up care to detect post COVID-19 condition (also known as long COVID or PCC).
- Countries should plan for COVID-19 surges using estimation tools for essential supplies, equipment and the work force.

Introduction

Nearly five years since the first SARS-CoV-2 infections were reported, the global COVID-19 situation has changed substantially. With widespread immunity from both vaccination and prior infection, currently circulating variants are now associated with lower severe disease rates and fewer hospitalizations. As a result, most countries have lifted public health and social measures and have moved to end their national COVID-19 emergencies. In this context, many around the world wish to move on and forget their experiences with the COVID-19 pandemic.

COVID-19 continues to circulate widely, however, presenting significant challenges to health systems worldwide. Tens of thousands of people are infected or re-infected with SARS-CoV-2 each week. From mid-September to mid-October 2024, WHO received reports of more than 296 000 confirmed cases of COVID-19 (see the [WHO COVID-19 Dashboard](#)). This figure is certainly an underestimate, as there has been a persistent decline in COVID-19 surveillance and reporting, and wastewater surveillance indicates that circulation is 2–20 times higher than the case numbers that are reported.

It is vital that countries sustain the public health response to COVID-19 amid ongoing illness and death and the emergence of SARS-CoV-2 variants, adapting it to the requirements based on the current COVID-19 situation and risk. Countries are increasingly balancing COVID-19 prevention and response activities with other social and economic priorities.

On 9 August 2023, the WHO Director-General of published [standing recommendations to support ongoing efforts for the prevention and control of COVID-19](#) (1) in accordance with provisions of Articles 16 to 18, and

50 to 53 of the International Health Regulations (2005) (IHR). These standing recommendations are in effect for all States Parties (WHO Member States plus Liechtenstein and the Holy See) until 30 April 2025 (1).

The updated WHO [Strategic Preparedness and Response plan for 2023-2025](#) (2) is designed to help countries end the emergency phase of the pandemic and shift to comprehensive, long-term management of COVID-19 within broader disease prevention and control programmes. As countries continue to strengthen COVID-19 programmes within their public health systems, two objectives remain critical: 1) reducing the risk of emergence of and controlling the circulation of SARS-CoV-2 variants with increased growth rates and immune escape, with a particular focus on reducing infection in high-risk and vulnerable populations; and 2) diagnosing and treating COVID-19 to reduce mortality, acute severe disease morbidity and long-term sequelae.

Purpose of this document

In 2022 and 2023, WHO released a package of policy briefs designed to help countries formulate policies to manage SARS-CoV-2 transmission, particularly in high-risk and vulnerable populations, and to reduce morbidity, mortality and long-term sequelae from COVID-19.

The policy briefs have been updated to reflect the current COVID-19 situation and risk, the approaches outlined in the September 2023 WHO document [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (3) and the Director General's Standing Recommendations for COVID-19 (1).

This policy brief is intended for national and sub-national policy- and decision-makers in ministries of health other governments agencies and partners engaged in and responsible for the health of the populations they serve. It provides a concise overview of the key recommended actions for Member States to take based on WHO COVID-19 technical guidance and strategies.

Essential actions for Member States to consider in adjusting COVID-19 policies

[The WHO Director-General's standing recommendations for COVID-19](#) recommends all Member States to continue to deliver optimal clinical care for COVID-19. They are encouraged to ensure provision, and related scaling-up mechanisms, of appropriate clinical care, with infection prevention and control measures in place, for suspected and confirmed COVID-19 cases in clinical settings.

COVID-19 clinical care should be integrated within health services as appropriate, and access to provision of evidence-based care and health products for patients with acute COVID-19 and post COVID-19 condition should be ensured (1).

1. Integrate COVID-19 clinical care pathways into primary health care systems

Quality clinical care for patients with COVID-19 requires early diagnosis and testing and must be accompanied by appropriate clinical care interventions. Identification and early appropriate treatment of patients at high risk of severe disease can reduce the number of cases of severe disease and hospitalization. Consequently, more lives will be saved.

Member States are advised to follow the World Health Organization (WHO) Living clinical guidelines for COVID-19 to drive policy at national and subnational levels. These guidelines cover [therapeutics](#), [supportive clinical management](#) and [preventative therapy](#). They continuously incorporate emerging evidence from clinical trials on supportive care interventions (such as oxygen and non-invasive ventilation) and therapeutic interventions (such as antivirals and immunomodulators) (4, 6).

These WHO recommendations have been distilled into infographics and training modules: [COVID-19 Clinical Care Pathway](#) (5) and the [Clinical care of severe acute respiratory infections – Tool kit](#) (7). These tools can be incorporated into national and subnational training, as necessary.

2. Ensure individuals who test positive for SARS-Co-2 are immediately linked to a clinical care pathway

Screening and testing protocols should be accessible in all units of the health system. This includes hospital settings, primary care centres and clinics where persons at high risk for severe COVID-19 may seek care. A COVID-19 testing-to-clinical-care linkage should be in place at facilities where noncommunicable diseases and infections, such as HIV, TB and malaria, and conditions causing immunosuppression are managed. In settings where home testing is used, linkages to clinical care and treatments also need to be in place and supported.

3. Ensure access to appropriate clinical interventions and treatments for patients with COVID-19

Access to appropriate clinical interventions and treatments for patients with COVID-19 includes oral antivirals such as nirmatrelvir-ritonavir, molnupiravir or intravenous remdesivir for patients with non-severe disease but who are at high risk of severe disease, based on patient profile and local resources. Patients with severe disease should have access to oxygen therapy, corticosteroids, interleukin-6 inhibitor, and baricitinib, based on patient profile and resources (see [Clinical management of COVID-19: Living guideline, 18 August 2023](#)) (4).

COVID-19 patients who are at greater risk for severe disease and death include older or immunocompromised individuals and those with co-morbidities including hypertension, cardiovascular disease, chronic respiratory disease and diabetes. Following confirmation of SARS-CoV-2 infection, it is critical for patients in these categories to receive prompt access to appropriate clinical interventions and be monitored carefully, including in a hospital, if necessary.

4. Adapt COVID-19 clinical care pathways for women who are pregnant or breastfeeding and children

WHO advises that all pregnant women with a history of contact with a person with confirmed COVID-19 be carefully monitored. Pregnant or recently pregnant women with suspected or confirmed mild or moderate COVID-19 may not require acute care in a hospital, unless there is concern for rapid deterioration or an inability to promptly return to hospital. Isolation to contain virus transmission is recommended and can be done at a health facility, community facility or at home, according to established COVID-19 care pathways. Pregnant or recently pregnant women with severe or critical COVID-19 require acute care in the hospital and specific interventions to improve maternal and foetal survival.

Mothers with suspected or confirmed COVID-19 should be encouraged to initiate and continue breastfeeding. Based on the available evidence, mothers should be counselled that the benefits of breastfeeding substantially outweigh the potential risks of transmission.

In children, the differential diagnosis for respiratory distress is particularly important, and COVID-19 confirmation needs to be made prior to determining severity. Children with suspected or confirmed SARS-CoV-2 infection should be kept together with caregivers wherever possible (if caregivers also have suspected or confirmed SARS-CoV-2 infection) and cared for in child-friendly spaces accounting for their specific medical, nursing, nutritional and mental health and psychosocial support needs. Alternative delivery platforms such as home-based, phone, telemedicine or community outreach teams should be considered to assist with monitoring.

5. Provide access to follow-up care for post COVID-19 condition (also known as long COVID or PCC)

Acute COVID-19 can lead to serious long-term complications, known as post COVID-19 condition. The following symptoms of post COVID-19 condition are common: fatigue, dyspnoea, cough, sleep disturbances, anxiety, depression, cognitive impairment and difficulty concentrating. Any of these symptoms may persist for more than 12 weeks. The needs of patients with post COVID-19 condition will vary, but many will require rehabilitation and other appropriate types of care. Post-acute sequelae of COVID-19 include other medical conditions occurring at a higher-than-expected rate, potentially affecting a wide range of organ systems. The consequences include kidney impairment, heart disease, stroke and others. These needs may stretch existing health systems. National authorities are encouraged to plan and budget for multidisciplinary post COVID-19 condition programmes and adopt sustainable financing to ensure equitable access to relevant therapies.

WHO remains committed to learning more about medium- and long-term outcomes for people with post COVID-19 condition and is developing clinical practice guidelines for management of affected individuals based on new evidence generated by the international medical research community and first responders. A WHO Guideline Development Group consisting of global experts, frontline providers and affected individuals is presently at work on new guidelines on diagnosis, treatment and rehabilitation. WHO-established clinical case definitions and other resources are available at [Post COVID-19 conditions](#) and [Rehabilitation and COVID-19](#) (8, 9).

Member States and funders are urged to support research studies on post COVID-19 condition in the interest of improved understanding of this condition around the world, not just in high-income countries, and design optimal clinical care for patients.

6. Plan for COVID-19 surges

Using estimation tools for essential supplies, equipment and workforce can ensure financial sustainability for the mid- and long-term integration of COVID-19 clinical care pathways into the health system. In countries where oxygen is a limited resource, investing in sustainable large-scale oxygen systems is advisable. Useful resources include: [WHO COVID-19 Essential Supplies Forecasting Tool \(COVID-ESFT\) v4.1](#); and [Oxygen - Global](#) (10, 11).

Conclusions

The policy considerations outlined in this brief come from existing WHO living guidelines which were developed in response to an urgent need for reliable, accessible and regularly updated guidance. These guidelines aim to contextualize emerging findings and provide clear recommendations for clinical practice, informing policy and practice worldwide.

COVID-19 vaccination continues to substantially reduce the risk of severe disease, hospitalization, and death. It also reduces the risk of post COVID-19 condition. However, low vaccine demand and insufficient access to vaccines leave many populations vulnerable and in need of treatment. Establishing and sustaining clear clinical care pathways for COVID-19 remains a crucial element of the public health response.

Plans for updating

WHO will continue to monitor the situation closely for any changes that may affect this policy brief. WHO will issue necessary updates as evidence becomes available and is reviewed.

References

1. Standing recommendations for COVID-19 issue by the Director-General of the World Health Organization (WHO) in accordance with the International Health Regulations (2005) (IHR). Geneva: World Health Organization; 2023. Retrieved from https://cdn.who.int/media/docs/default-source/documents/ihr/covid-19_standing-recommendations_9-august-2023.pdf?sfvrsn=805ad4e4_8&download=true
2. From emergency response to long-term COVID-19 disease management: sustaining gains made during the COVID-19 pandemic. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/367420>
3. From emergency response to long-term COVID-19 disease management: ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: guidance on calibrating the response. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/372712>
4. World Health Organization. Therapeutics and COVID-19: Living Guideline, 18 August 2023. [Internet]. 2023. Retrieved from <https://www.who.int/publications/i/item/WHO-2019-nCoV-clinical-2023.2>
5. World Health Organization. The COVID-19 Clinical Care Pathway [Internet]. 2022. Retrieved from <https://www.who.int/tools/covid-19-clinical-care-pathway>
6. World Health Organization. Clinical management of COVID-19. [Internet]. 2022. Retrieved from [Clinical management of COVID-19 \(who.int\)](https://www.who.int/publications/i/item/clinical-management-of-covid-19)
7. Clinical care of severe acute respiratory infections – Tool kit [Internet]. 2022. Retrieved from <https://www.who.int/publications/i/item/clinical-care-of-severe-acute-respiratory-infections-tool-kit>
8. World Health Organization. Post COVID-19 condition. [Internet]. 2022. Retrieved from [Post COVID-19 condition \(who.int\)](https://www.who.int/publications/i/item/post-covid-19-condition)
9. World Health Organization. Rehabilitation and COVID-19. [Internet]. 2022. Retrieved from [Rehabilitation and COVID-19 \(who.int\)](https://www.who.int/publications/i/item/rehabilitation-and-covid-19)
10. World Health Organization. WHO COVID-19 Essential Supplies Forecasting Tools (COVID-ESFT) v 4.1. [Internet]. 2022. Retrieved from [Therapeutics and COVID-19: living guideline \(who.int\)](https://www.who.int/publications/i/item/therapeutics-and-covid-19-living-guideline)
11. World Health Organization. Oxygen -Global [Internet]. 2022. Retrieved from [Oxygen - Global \(who.int\)](https://www.who.int/publications/i/item/oxygen-global)

Infection prevention and control measures for COVID-19 in health care settings

December 2024

Key points

- The WHO Director-General's standing recommendations for COVID-19 advise countries to ensure that infection prevention and control measures are in place for suspected and confirmed COVID-19 cases in clinical settings and that health care providers receive training accordingly and access to personal protective equipment.
- Countries are encouraged to continue delivering optimal clinical care for patients with COVID-19, including maintaining measures to protect patients and health workers.
- Health care settings can amplify infectious disease outbreaks, including COVID-19. Maintaining effective infection prevention and control (IPC) programmes is, therefore, paramount.
- National and sub-national level authorities should maintain readiness to respond to the possibility of future surges of COVID-19 that could overwhelm health systems.

Introduction

Nearly five years since the first SARS-CoV-2 infections were reported, the global COVID-19 situation has changed substantially. With widespread immunity from both vaccination and prior infection, currently circulating variants are now associated with lower severe disease rates and fewer hospitalizations. As a result, most countries have lifted public health and social measures and have moved to end their national COVID-19 emergencies. In this context, many around the world wish to move on and forget their experiences with the COVID-19 pandemic.

COVID-19 continues to circulate widely, however, presenting significant challenges to health systems worldwide. Tens of thousands of people are infected or re-infected with SARS-CoV-2 each week. From mid-September to mid-October 2024, WHO received reports of more than 296 000 confirmed cases of COVID-19 (see the [WHO COVID-19 Dashboard](#)). This figure is certainly an underestimate, as there has been a persistent decline in COVID-19 surveillance and reporting, and wastewater surveillance indicates that circulation is 2–20 times higher than the case numbers that are reported.

It is vital that countries sustain the public health response to COVID-19 amid ongoing illness and death and the emergence of SARS-CoV-2 variants, adapting it to the requirements based on the current COVID-19 situation and risk. Countries are increasingly balancing COVID-19 prevention and response activities with other social and economic priorities.

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The updated WHO [Strategic Preparedness and Response plan for 2023-2025](#) (2) is designed to help countries end the emergency phase of the pandemic and shift to comprehensive, long-term management of COVID-19 within broader disease prevention and control programmes. As countries continue to strengthen COVID-19 programmes within their public health systems, two objectives remain critical: 1) reducing the risk of emergence of and controlling the circulation of SARS-CoV-2 variants with increased growth rates and immune escape, with a particular focus on reducing infection in high-risk and vulnerable populations; and 2) diagnosing and treating COVID-19 to reduce mortality, acute severe disease morbidity and long-term sequelae.

Purpose of this document

In 2022 and 2023, WHO released a package of policy briefs designed to help countries formulate policies to manage SARS-CoV-2 transmission, particularly in high-risk and vulnerable populations, and to reduce morbidity, mortality and long-term sequelae from COVID-19. The policy briefs have been updated to reflect current COVID-19 situation and risk and the approaches outlined in the September 2023 WHO document [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (3), and the Director-General's standing recommendations for COVID-19 (1).

The briefs are intended for national and sub-national policy- and decision-makers in ministries of health other governments agencies and partners engaged in and responsible for the health of the populations they serve.

The recommendations in this brief are States based on recommendations published in the document [WHO Infection prevention and control in the context of COVID-19: a guideline, 21 December 2023](#) (4, 5) and other technical documents (e.g. [Global strategy on infection prevention and control](#) (6), [Strategic Preparedness and Response plan for 2023-2025](#) (1) and [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (3). It also emphasizes the need for sustained financing and a trained, protected and respected workforce to maintain these life-saving actions in the context of competing health and non-health emergencies. It additionally recognizes the need to strengthen the acute and longer-term response for COVID-19 in relation to other pressing public health issues.

Essential actions for Member States to consider in adjusting COVID-19 policies

The COVID-19 pandemic revealed significant weaknesses in health care systems, particularly in fragile, conflict-affected and vulnerable settings and among at-risk populations. It underscored the urgent need to enhance infection prevention and control (IPC) programmes and outbreak response capacities, alongside broader reforms for safe and quality care. The WHO Director-General's standing recommendations advise countries to ensure that infection prevention and control measures are in place for suspected and confirmed COVID-19 cases in clinical settings and that health care providers receive training accordingly and access to personal protective equipment. They further recommend implementing measures to protect health workers and care givers as appropriate (1).

While many countries made notable IPC improvements during the pandemic, these were often confined to emergency responses. WHO continues to recommend that all possible efforts to reduce SARS-CoV-2 transmission within health care facilities should continue and be strengthened.

It remains important to focus on the following three key objectives for COVID-19 management and control: elevate the importance of IPC programmes; maintain outbreak readiness and response capacities; and establish and maintain appropriate infrastructure needed for safe health service delivery and a resilient health workforce.

1. Elevate the importance of IPC programmes

At the 77th World Health Assembly in May 2024, a [Global action plan and monitoring framework for infection prevention and control \(IPC\) for 2024–2030](#) was approved to support the implementation of the [Global strategy on infection prevention and control](#) (6). The plan outlines eight strategic directions: political commitment, active IPC programs, integration and coordination, IPC training, data utilization, advocacy, research and stakeholder collaboration (6). The new action plan outlines specific actions, indicators and targets for Member States (as well as other international and national stakeholders and partners) to enhance IPC practices, addressing critical gaps that have historically exacerbated outbreaks in health care settings. Progress will be tracked against targets, including some that should be prioritized whenever possible. These include dedicated IPC and water, sanitation and hygiene (WASH) funds; IPC legislation; and robust surveillance systems for health care-associated infections and antimicrobial resistance (AMR) (6).

For policy makers, the emphasis must be on securing robust political commitment and leadership to implement and sustain effective IPC programs. This involves establishing and enforcing comprehensive legal frameworks, regulations and accreditation systems to ensure that IPC practices are integrated at all levels (5). Mobilizing resources and ensuring sustained financing are crucial to address local needs and support long-term IPC initiatives. By prioritizing these actions, policy makers can drive substantial improvements in infection prevention, protect public health and enhance the resilience of health systems (6).

2. Maintain outbreak readiness and response capacities

Health care facilities can amplify infectious disease outbreaks, including COVID-19, making it paramount to maintain IPC operational readiness (4, 5). Further surges of COVID-19, especially those due to new SARS-CoV-2 variants, could overwhelm health systems.

In the event of a surge, countries should be prepared to convene or reconvene a national task force, including IPC experts, to rapidly review the latest epidemiological and scientific evidence to revise IPC policies and national guidelines, if necessary (7). To maintain readiness, a system for dissemination of this information to support implementation of IPC activities across the health system should be in place. It is crucial to regularly review contingency plans, including human and financial resources, and assess the procurement of supplies needed to effectively implement IPC measures and WASH services in health facilities and community settings (7). Regular testing of the system through simulation or tabletop exercises can help ensure readiness for COVID-19 surges and identify any gaps (6).

Surveillance of health care-associated infections within health facilities is essential for the rapid identification of COVID-19 outbreaks, including among health and care workers, and requires ongoing investment. These outbreaks can amplify transmission both within health care facilities and in communities.

3. Maintain appropriate infrastructure and a resilient workforce

Member States should regularly assess IPC programmes and WASH services in health care facilities using standardized tools. Action plans should be developed, and adequate funding provided to address identified gaps. WHO offers tools to support these efforts ([WASH FIT](#) (8), [IPCAT](#) (9), [IPCAT-MR](#) (10), [SPAR](#) (11)). Investments in health facility infrastructure, such as ventilation systems and waste management, are critical for supporting preparedness, readiness and response activities.

IPC training to prepare for surges of COVID-19 and other emerging high-threat diseases, along with implementing policies to protect health workers (including vaccination, in accordance with national policy), is essential for strengthening capacities and maintaining a resilient health workforce (see [Guide for](#)

[the development and implementation of occupational health and safety programmes for health workers](#)) (12). It is also critical to maintain procurement and supply chain systems for essential items such as hand sanitizer and personal protective equipment that can be scaled up in the event of a COVID-19 upsurge (7).

Finally, policy makers should empower health-facility leadership to enhance IPC and WASH capacities. This includes ensuring the safe flow of patients and staff, implementing COVID-19 screening, ensuring the availability of personal protective equipment and improving the health-care environment to support these measures effectively (6).

Conclusions

As COVID-19 is integrated into broader infectious disease IPC programmes, there is a pressing need to build resilient health systems that address existing gaps in IPC implementation. WHO urges countries to maintain IPC operational readiness to prevent future COVID-19 outbreaks and manage those that arise, while ensuring the sustainability of IPC programmes in the long term to reduce the endemic burden of health care-associated infections and antimicrobial resistance (13).

Plans for updating

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References

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2. From emergency response to long-term COVID-19 disease management: sustaining gains made during the COVID-19 pandemic. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/367420>.
3. From emergency response to long-term COVID-19 disease management: ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: guidance on calibrating the response. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/372712>.
4. Infection prevention and control in the context of COVID-19: a guideline, 21 December 2023. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/375200>.
5. Dunn, K., Hurwitz, H.H., Toledo, J.P., Schwaber, M.J., Chu, M., Chou, R., Ford, N., Allegranzi, B. and Baller, A., 2024. Summary of WHO infection prevention and control guideline for covid-19: striving for evidence based practice in infection prevention and control. *bmj*, 385.
6. Global strategy on infection prevention and control. World Health Organization. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/376751>.
7. World Health Organization. Framework and toolkit for infection prevention and control in outbreak preparedness, readiness and response at the national level. Geneva: World Health Organization; 2021. Retrieved from <https://iris.who.int/handle/10665/345251>.
8. (Water and sanitation for health facility improvement tool (WASH FIT): a practical guide for improving quality of care through water, sanitation and hygiene in health care facilities, 2nd

- ed. World Health Organization. World Health Organization & United Nations Children's Fund (UNICEF); 2022. Retrieved from <https://iris.who.int/handle/10665/353411>.
9. Instructions for the national infection prevention and control assessment tool 2 (IPCAT2). Geneva: World Health Organization; 2017. Retrieved from <https://iris.who.int/handle/10665/330078>.
 10. Assessment tool of the minimum requirements for infection prevention and control programmes at the national level. Geneva: World Health Organization; 2021. Retrieved from <https://www.who.int/publications/m/item/assessment-tool-of-the-minimum-requirements-for-infection-prevention-and-control-programmes-at-the-national-level>.
 11. e-SPAR. Geneva: World Health Organization [Website] Retrieved from <https://extranet.who.int/e-spar/>.
 12. Caring for those who care: guide for the development and implementation of occupational health and safety programmes for health workers. World Health Organization & International Labour Organization; 2022. Retrieved from <https://iris.who.int/handle/10665/351436>.
 13. Building health systems resilience for universal health coverage and health security during the COVID-19 pandemic and beyond: WHO position paper. Geneva: World Health Organization; 2021. Retrieved from <https://iris.who.int/handle/10665/346515>.

COVID-19 vaccination

December 2024

Key points

- As per the WHO Director General's standing recommendations, Member States are recommended to continue to offer COVID-19 vaccination based on both the recommendations of the WHO Strategic Advisory Group of Experts on Immunization (SAGE) and on national prioritization informed by cost benefit reviews.
- WHO SAGE recommends a simplified single-dose regimen for immunization for most COVID-19 vaccines in high and medium priority-use groups. This simplified dosing regimen aims to improve acceptance and uptake, while providing adequate protection at a time when most people have had at least one prior SARS-CoV-2 infection.
- Countries are encouraged to explore the periodic re-vaccination of most high priority-use groups and certain sub-populations with special considerations, at an interval of 6–12 months, depending on the group.
- Countries should procure and use monovalent JN.1 lineage-adapted vaccines as they are likely to provide modestly enhanced protection against currently circulating variants. However, vaccination should not be delayed in anticipation of updated variant-containing vaccines as all currently approved COVID-19 vaccines continue to provide protection against severe disease and death.
- Countries are encouraged to use evidence-based and behaviourally informed strategies to increase confidence in and uptake of COVID-19 vaccination, particularly in high priority-use groups. This may include exploring co-administration of COVID-19 and seasonal influenza vaccines.
- WHO recommends integrating COVID-19 vaccination into primary health care and other routine health services.
- Countries and donors should continue to invest in research and development of vaccine products with improved attributes.

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This policy brief is intended for national and sub-national policy and decision makers in ministries of health other governments agencies and partners engaged in and responsible for the health of the populations they serve. It provides a concise overview of the key recommended actions for Member States to take based on WHO COVID-19 technical guidance and strategies.

Essential actions for Member States to consider in updating COVID-19 vaccination policies and programmatic approaches

Countries should continue to offer COVID-19 vaccination based on the recommendations of the WHO Strategic Advisory Group of Experts on Immunization (SAGE) and on national prioritization informed by cost benefit reviews; and vaccine delivery should be appropriately integrated into health services (1). Countries are encouraged to improve efforts to increase COVID-19 vaccination coverage for all people in high-priority groups using COVID-19 vaccines recommended by WHO or vaccines approved by national regulatory authorities, taking into account SAGE recommendations, and continue surveillance of vaccination uptake and adverse events (1). It is further recommended that countries actively address

vaccine misinformation, disinformation, acceptance and demand issues with communities and health and care providers (1).

1. Revise target groups and schedules based on latest available data and global/regional recommendations

In November 2023, the WHO Strategic Advisory Group of Experts on Immunization (SAGE) updated its [Roadmap for prioritizing uses of COVID-19 vaccines](#), drawing on the latest global epidemiological, vaccine effectiveness and public health impact data (3).

Under the updated roadmap, WHO recommends a simplified single-dose regimen for immunization for most COVID-19 vaccines¹ in high- and medium priority-use groups. This simplified dosing regimen aims to improve acceptance and uptake, while providing adequate protection at a time when most people have had at least one prior SARS-CoV-2 infection. High priority-use groups include older adults² and other adults living with severe obesity or comorbidities that increase their risk of severe COVID-19³. Medium priority-use groups include healthy adults⁴ and children and adolescents living with severe obesity or comorbidities that increase their risk of severe COVID-19⁵. The roadmap outlines distinct vaccination recommendations for several sub-populations with special considerations, notably persons with immunocompromising conditions⁶, pregnant adults and adolescents and health and care workers with direct patient contact. Primary vaccination with one to three doses is recommended depending on the group, based on their risk of severe COVID-19. Vaccination in low priority-use groups, including healthy children and adolescents, can be considered based on country priorities and available resources.

The updated roadmap further recommends the periodic re-vaccination of most high priority-use groups and sub-populations with special considerations at an interval of 6-12 months, depending on the group. Re-vaccination is not routinely recommended for medium and low priority-use groups.

2. Use available vaccine stocks while pursuing access to latest variant-adapted vaccine products

While currently approved COVID-19 vaccines (including monovalent index virus only vaccines, bivalent BA.4/.5 vaccines and monovalent XBB vaccines) continue to provide protection against severe disease and death, the WHO Technical Advisory Group on COVID-19 Vaccine Composition (TAG-CO-VAC) [advised using a monovalent JN.1 lineage as the antigen in future](#) vaccine formulations during its April 2024 meeting (4).

Several COVID-19 vaccine manufacturers are developing or have developed monovalent JN.1 lineage vaccines. These products should become available in late 2024 and 2025. Based on immunogenicity and modelling studies, monovalent JN.1 lineage-containing vaccines are likely to have modestly enhanced vaccine effectiveness compared to monovalent XBB-containing vaccines, bivalent BA.4/.5-containing vaccines and monovalent index virus-only vaccines at a time when JN.1 lineages predominate SARS-CoV-2 circulation. Hence, these vaccines should be used when they become available.

Nevertheless, approved COVID-19 vaccines continue to provide protection against severe disease and death. Hence, any of the WHO emergency use-listed or prequalified COVID-19 vaccines can still be used

¹ Inactivated COVID-19 vaccines still require two doses as initial doses, however.

² Minimum age of 'older adults' to be decided by countries; often it is 50 or 60 years and older.

³ Comorbidities that can put an individual at higher risk of severe COVID-19 can include diabetes, chronic lung disease, and heart, liver, and kidney diseases, among others.

⁴ Age range of 'adults' to be decided by countries; often it is 18–49 or 18–59 years.

⁵ Age range of 'children and adolescents' to be decided by countries; often it is 5–17 years.

⁶ Immunocompromised individuals can include those with active cancer, transplant recipients, those immunodeficient and being actively treated with immunosuppressives, and those living with HIV with a current CD4 cell count of <200 cells/ul, with evidence of opportunistic infection, and not on HIV treatment, and/or with a detectable viral load, among others.

either for primary vaccination or for periodic revaccination if the monovalent JN.1-containing vaccines are unavailable. Vaccination should not be delayed in anticipation of access to variant-containing vaccines as there is a greater benefit in ensuring that persons at high risk of developing severe COVID-19 receive a dose of any available vaccine as compared to delaying vaccination.

3. Accelerate COVID-19 vaccine uptake in high priority-use groups, including periodic revaccination

[The WHO Director-General's standing recommendations for COVID-19](#) emphasize the need to actively address vaccine misinformation, disinformation, acceptance and demand issues with communities and health and care providers (1). [WHO recommends that countries use evidence-based and behaviourally informed strategies to increase confidence in and uptake of COVID-19 vaccination](#), particularly in high priority-use groups (5). This includes the gathering and use of local data on behavioural and social drivers of vaccination to assess root causes of low uptake and to design and evaluate interventions tailored toward high priority-use groups. Interventions to increase trust and uptake can include targeted information campaigns via trusted information sources, partnering with local and community actors to increase community engagement training health and care workers to increase their confidence in recommending COVID-19 vaccination and improvements to delivery strategies to increase the ease of access to vaccination.

Co-administration of COVID-19 vaccines with other vaccines, notably those for seasonal influenza, may increase vaccine uptake by reducing the number of vaccination contacts needed by one person. Further, co-administering vaccines may offer efficiencies in the programmatic delivery of both vaccines, reducing both administrative and programmatic costs. [WHO encourages countries to explore opportunities to co-administer COVID-19 and seasonal influenza vaccines](#) to increase uptake of both vaccines (6).

In addition to the social and behavioral data mentioned above, WHO continues to recommend and request that countries collect, analyse and report COVID-19 vaccine programme implementation data, including data on vaccine uptake in high priority-use groups, vaccination policies, products in use, product procurement and pricing and vaccine safety (7). These data should be used to inform policy and programme decision-making at all levels of the health system.

4. Integrate COVID-19 vaccination with routine health services

Given the latest policy recommendations and current COVID-19 vaccine programme goals, [WHO recommends that countries integrate COVID-19 vaccination into primary health care and other routine health services](#) (8), moving away from mass, campaign-style vaccination. This recommendation reflects shifting vaccination goals, as the focus moves towards reaching high priority-use groups and away from reaching the entire population. From a sustainability perspective, vaccination through routine health services requires fewer human and financial resources as compared to the mass vaccination efforts that characterized the early rollout.

Routinization of COVID-19 vaccination represents an opportunity for health systems to sustain the advances made in vaccination programs during the pandemic while enhancing preparedness, prevention and response capacities against future threats. It promotes the life course approach to vaccination and encourages the development of vaccine delivery platforms for at-risk groups, notably older adults and health and care workers. These delivery platforms can also facilitate the introduction of new adult-targeted vaccines and the 'catchup' of missed doses for other vaccines. WHO recommends that countries assess the new capacities developed and investments made during COVID-19, identifying those that can be sustained and carried forward in service of broader disease control programmes and health system

strength. Examples might include new or reinforced immunization information systems, enhanced cold chain infrastructure and training programmes for health and care workers.

5. Continue to invest in research & development of new vaccine products

Policy makers and donors should consider increasing financial and technical investments in innovations aimed at developing more durable, broadly protective COVID-19 vaccines, including those designed to reduce SARS-CoV-2 transmission and those with attributes for improved delivery. New vaccine products able to substantially reduce SARS-CoV-2 transmission will be critical to reducing the risk of the emergence of new variants and to diminishing the likelihood of resultant new waves of disease. WHO provides guidance for vaccine development [through target product profiles](#) and vaccine composition recommendations (4, 9).

Conclusions

To date, nearly 14 billion doses of COVID-19 vaccines have been administered worldwide. While important disparities persist, nearly all countries have reached high levels of primary COVID-19 immunization coverage. This high level of coverage, combined with the fact that most people have had at least one SARS-CoV-2 infection, has contributed to increased global population immunity.

SARS-CoV-2 continues to evolve, however, and new variants continue to fuel ongoing transmission, resulting in new cases of severe disease and death, especially in high priority-use groups. It is important that countries continue to target high priority-use groups for vaccination. This will require adaptive and resilient approaches to ensure that vaccination programmes remain sustainable, mainly by integrating COVID-19 vaccination into routine health services. It is critical that Member States routinely review and update COVID-19 vaccination policies and programme goals to align with the current epidemiological situation and broader objectives for COVID-19 prevention and control.

Plans for updating

WHO will continue to monitor the situation closely for any changes that may affect this policy brief. WHO will issue necessary updates as evidence becomes available and is reviewed.

References

1. Standing recommendations for COVID-19 issued by the Director-General of the World Health Organization (WHO) in accordance with the International Health Regulations (2005) (IHR). Geneva: World Health Organization; 2023. Retrieved 12 November 2024, from [https://www.who.int/publications/m/item/standing-recommendations-for-covid-19-issued-by-the-director-general-of-the-world-health-organization-\(who\)-in-accordance-with-the-international-health-regulations-\(2005\)-\(ihr\)](https://www.who.int/publications/m/item/standing-recommendations-for-covid-19-issued-by-the-director-general-of-the-world-health-organization-(who)-in-accordance-with-the-international-health-regulations-(2005)-(ihr))
2. Strategic Preparedness and Response Plan: April 2023-April 2025 – From Emergency Response to Long-term COVID-19 Disease Management: Sustaining Gains Made During the COVID-19 Pandemic. Geneva: World Health Organization; 2023. Retrieved 12 November 2024, from <https://www.who.int/publications/i/item/WHO-WHE-SPP-2023.1>
3. WHO SAGE Roadmap for prioritizing uses of COVID-19 vaccines. Geneva: World Health Organization; 2023. Retrieved 23 August 2024, from <https://www.who.int/publications/i/item/WHO-2019-nCoV-Vaccines-SAGE-Prioritization-2023.1>.
4. Statement on the antigen composition of COVID-19 vaccines. Geneva: World Health Organization; 2024. Retrieved 23 August 2024, from <https://www.who.int/news/item/26-04-2024-statement-on-the-antigen-composition-of-covid-19-vaccines>.
5. Increasing COVID-19 vaccination uptake. Geneva: World Health Organization; 2023. Retrieved 23 August 2024, from <https://www.who.int/publications/m/item/increasing-covid-19-vaccination-uptake>.
6. Coadministration of seasonal inactivated influenza and COVID-19 vaccines: Interim guidance. Geneva: World Health Organization; 2021. Retrieved 23 August 2024, from https://www.who.int/publications/i/item/WHO-2019-nCoV-vaccines-SAGE_recommendation-coadministration-influenza-vaccines.
7. Updates to COVID-19 vaccination data reporting requirements. Geneva: World Health Organization, 2023. Retrieved 08 November 2024, from <https://www.technet-21.org/en/resources/guidance/updates-to-covid-19-vaccination-data-reporting-requirements>
8. Considerations for integrating COVID-19 vaccination into immunization programmes and primary health care for 2022 and beyond. Geneva: World Health Organization, 2023. Retrieved 23 August 2024, from <https://www.who.int/publications/i/item/9789240064454>.
9. WHO Target Product Profiles for COVID-19 Vaccines. Revised version April 2022. Geneva: World Health Organization; 2022. Retrieved 23 August 2024, from <https://www.who.int/publications/m/item/who-target-product-profiles-for-covid-19-vaccines>.

Clinical management of COVID-19

December 2024

Key points

- Establishing and sustaining clear pathways to clinical care remains a critical element of the response to COVID-19.
- As per the WHO Director-General's standing recommendations, countries are encouraged to deliver optimal clinical care for COVID-19, appropriately integrated into all levels of health service, including access to proven treatments. Individuals who test positive for SARS-CoV-2 should be immediately linked to a clinical care pathway.
- Countries should adapt COVID-19 clinical care pathways for women who are pregnant or breastfeeding and children.
- Countries are encouraged to provide access to follow-up care to detect post COVID-19 condition (also known as long COVID or PCC).
- Countries should plan for COVID-19 surges using estimation tools for essential supplies, equipment and the work force.

Introduction

Nearly five years since the first SARS-CoV-2 infections were reported, the global COVID-19 situation has changed substantially. With widespread immunity from both vaccination and prior infection, currently circulating variants are now associated with lower severe disease rates and fewer hospitalizations. As a result, most countries have lifted public health and social measures and have moved to end their national COVID-19 emergencies. In this context, many around the world wish to move on and forget their experiences with the COVID-19 pandemic.

COVID-19 continues to circulate widely, however, presenting significant challenges to health systems worldwide. Tens of thousands of people are infected or re-infected with SARS-CoV-2 each week. From mid-September to mid-October 2024, WHO received reports of more than 296 000 confirmed cases of COVID-19 (see the [WHO COVID-19 Dashboard](#)). This figure is certainly an underestimate, as there has been a persistent decline in COVID-19 surveillance and reporting, and wastewater surveillance indicates that circulation is 2–20 times higher than the case numbers that are reported.

It is vital that countries sustain the public health response to COVID-19 amid ongoing illness and death and the emergence of SARS-CoV-2 variants, adapting it to the requirements based on the current COVID-19 situation and risk. Countries are increasingly balancing COVID-19 prevention and response activities with other social and economic priorities.

On 9 August 2023, the WHO Director-General of published [standing recommendations to support ongoing efforts for the prevention and control of COVID-19](#) (1) in accordance with provisions of Articles 16 to 18, and

50 to 53 of the International Health Regulations (2005) (IHR). These standing recommendations are in effect for all States Parties (WHO Member States plus Liechtenstein and the Holy See) until 30 April 2025 (1).

The updated WHO [Strategic Preparedness and Response plan for 2023-2025](#) (2) is designed to help countries end the emergency phase of the pandemic and shift to comprehensive, long-term management of COVID-19 within broader disease prevention and control programmes. As countries continue to strengthen COVID-19 programmes within their public health systems, two objectives remain critical: 1) reducing the risk of emergence of and controlling the circulation of SARS-CoV-2 variants with increased growth rates and immune escape, with a particular focus on reducing infection in high-risk and vulnerable populations; and 2) diagnosing and treating COVID-19 to reduce mortality, acute severe disease morbidity and long-term sequelae.

Purpose of this document

In 2022 and 2023, WHO released a package of policy briefs designed to help countries formulate policies to manage SARS-CoV-2 transmission, particularly in high-risk and vulnerable populations, and to reduce morbidity, mortality and long-term sequelae from COVID-19.

The policy briefs have been updated to reflect the current COVID-19 situation and risk, the approaches outlined in the September 2023 WHO document [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (3) and the Director General's Standing Recommendations for COVID-19 (1).

This policy brief is intended for national and sub-national policy- and decision-makers in ministries of health other governments agencies and partners engaged in and responsible for the health of the populations they serve. It provides a concise overview of the key recommended actions for Member States to take based on WHO COVID-19 technical guidance and strategies.

Essential actions for Member States to consider in adjusting COVID-19 policies

[The WHO Director-General's standing recommendations for COVID-19](#) recommends all Member States to continue to deliver optimal clinical care for COVID-19. They are encouraged to ensure provision, and related scaling-up mechanisms, of appropriate clinical care, with infection prevention and control measures in place, for suspected and confirmed COVID-19 cases in clinical settings.

COVID-19 clinical care should be integrated within health services as appropriate, and access to provision of evidence-based care and health products for patients with acute COVID-19 and post COVID-19 condition should be ensured (1).

1. Integrate COVID-19 clinical care pathways into primary health care systems

Quality clinical care for patients with COVID-19 requires early diagnosis and testing and must be accompanied by appropriate clinical care interventions. Identification and early appropriate treatment of patients at high risk of severe disease can reduce the number of cases of severe disease and hospitalization. Consequently, more lives will be saved.

Member States are advised to follow the World Health Organization (WHO) Living clinical guidelines for COVID-19 to drive policy at national and subnational levels. These guidelines cover [therapeutics](#), [supportive clinical management](#) and [preventative therapy](#). They continuously incorporate emerging evidence from clinical trials on supportive care interventions (such as oxygen and non-invasive ventilation) and therapeutic interventions (such as antivirals and immunomodulators) (4, 6).

These WHO recommendations have been distilled into infographics and training modules: [COVID-19 Clinical Care Pathway](#) (5) and the [Clinical care of severe acute respiratory infections – Tool kit](#) (7). These tools can be incorporated into national and subnational training, as necessary.

2. Ensure individuals who test positive for SARS-Co-2 are immediately linked to a clinical care pathway

Screening and testing protocols should be accessible in all units of the health system. This includes hospital settings, primary care centres and clinics where persons at high risk for severe COVID-19 may seek care. A COVID-19 testing-to-clinical-care linkage should be in place at facilities where noncommunicable diseases and infections, such as HIV, TB and malaria, and conditions causing immunosuppression are managed. In settings where home testing is used, linkages to clinical care and treatments also need to be in place and supported.

3. Ensure access to appropriate clinical interventions and treatments for patients with COVID-19

Access to appropriate clinical interventions and treatments for patients with COVID-19 includes oral antivirals such as nirmatrelvir-ritonavir, molnupiravir or intravenous remdesivir for patients with non-severe disease but who are at high risk of severe disease, based on patient profile and local resources. Patients with severe disease should have access to oxygen therapy, corticosteroids, interleukin-6 inhibitor, and baricitinib, based on patient profile and resources (see [Clinical management of COVID-19: Living guideline, 18 August 2023](#)) (4).

COVID-19 patients who are at greater risk for severe disease and death include older or immunocompromised individuals and those with co-morbidities including hypertension, cardiovascular disease, chronic respiratory disease and diabetes. Following confirmation of SARS-CoV-2 infection, it is critical for patients in these categories to receive prompt access to appropriate clinical interventions and be monitored carefully, including in a hospital, if necessary.

4. Adapt COVID-19 clinical care pathways for women who are pregnant or breastfeeding and children

WHO advises that all pregnant women with a history of contact with a person with confirmed COVID-19 be carefully monitored. Pregnant or recently pregnant women with suspected or confirmed mild or moderate COVID-19 may not require acute care in a hospital, unless there is concern for rapid deterioration or an inability to promptly return to hospital. Isolation to contain virus transmission is recommended and can be done at a health facility, community facility or at home, according to established COVID-19 care pathways. Pregnant or recently pregnant women with severe or critical COVID-19 require acute care in the hospital and specific interventions to improve maternal and foetal survival.

Mothers with suspected or confirmed COVID-19 should be encouraged to initiate and continue breastfeeding. Based on the available evidence, mothers should be counselled that the benefits of breastfeeding substantially outweigh the potential risks of transmission.

In children, the differential diagnosis for respiratory distress is particularly important, and COVID-19 confirmation needs to be made prior to determining severity. Children with suspected or confirmed SARS-CoV-2 infection should be kept together with caregivers wherever possible (if caregivers also have suspected or confirmed SARS-CoV-2 infection) and cared for in child-friendly spaces accounting for their specific medical, nursing, nutritional and mental health and psychosocial support needs. Alternative delivery platforms such as home-based, phone, telemedicine or community outreach teams should be considered to assist with monitoring.

5. Provide access to follow-up care for post COVID-19 condition (also known as long COVID or PCC)

Acute COVID-19 can lead to serious long-term complications, known as post COVID-19 condition. The following symptoms of post COVID-19 condition are common: fatigue, dyspnoea, cough, sleep disturbances, anxiety, depression, cognitive impairment and difficulty concentrating. Any of these symptoms may persist for more than 12 weeks. The needs of patients with post COVID-19 condition will vary, but many will require rehabilitation and other appropriate types of care. Post-acute sequelae of COVID-19 include other medical conditions occurring at a higher-than-expected rate, potentially affecting a wide range of organ systems. The consequences include kidney impairment, heart disease, stroke and others. These needs may stretch existing health systems. National authorities are encouraged to plan and budget for multidisciplinary post COVID-19 condition programmes and adopt sustainable financing to ensure equitable access to relevant therapies.

WHO remains committed to learning more about medium- and long-term outcomes for people with post COVID-19 condition and is developing clinical practice guidelines for management of affected individuals based on new evidence generated by the international medical research community and first responders. A WHO Guideline Development Group consisting of global experts, frontline providers and affected individuals is presently at work on new guidelines on diagnosis, treatment and rehabilitation. WHO-established clinical case definitions and other resources are available at [Post COVID-19 conditions](#) and [Rehabilitation and COVID-19](#) (8, 9).

Member States and funders are urged to support research studies on post COVID-19 condition in the interest of improved understanding of this condition around the world, not just in high-income countries, and design optimal clinical care for patients.

6. Plan for COVID-19 surges

Using estimation tools for essential supplies, equipment and workforce can ensure financial sustainability for the mid- and long-term integration of COVID-19 clinical care pathways into the health system. In countries where oxygen is a limited resource, investing in sustainable large-scale oxygen systems is advisable. Useful resources include: [WHO COVID-19 Essential Supplies Forecasting Tool \(COVID-ESFT\) v4.1](#); and [Oxygen - Global](#) (10, 11).

Conclusions

The policy considerations outlined in this brief come from existing WHO living guidelines which were developed in response to an urgent need for reliable, accessible and regularly updated guidance. These guidelines aim to contextualize emerging findings and provide clear recommendations for clinical practice, informing policy and practice worldwide.

COVID-19 vaccination continues to substantially reduce the risk of severe disease, hospitalization, and death. It also reduces the risk of post COVID-19 condition. However, low vaccine demand and insufficient access to vaccines leave many populations vulnerable and in need of treatment. Establishing and sustaining clear clinical care pathways for COVID-19 remains a crucial element of the public health response.

Plans for updating

WHO will continue to monitor the situation closely for any changes that may affect this policy brief. WHO will issue necessary updates as evidence becomes available and is reviewed.

References

1. Standing recommendations for COVID-19 issue by the Director-General of the World Health Organization (WHO) in accordance with the International Health Regulations (2005) (IHR). Geneva: World Health Organization; 2023. Retrieved from https://cdn.who.int/media/docs/default-source/documents/ihr/covid-19_standing-recommendations_9-august-2023.pdf?sfvrsn=805ad4e4_8&download=true
2. From emergency response to long-term COVID-19 disease management: sustaining gains made during the COVID-19 pandemic. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/367420>
3. From emergency response to long-term COVID-19 disease management: ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: guidance on calibrating the response. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/372712>
4. World Health Organization. Therapeutics and COVID-19: Living Guideline, 18 August 2023. [Internet]. 2023. Retrieved from <https://www.who.int/publications/i/item/WHO-2019-nCoV-clinical-2023.2>
5. World Health Organization. The COVID-19 Clinical Care Pathway [Internet]. 2022. Retrieved from <https://www.who.int/tools/covid-19-clinical-care-pathway>
6. World Health Organization. Clinical management of COVID-19. [Internet]. 2022. Retrieved from [Clinical management of COVID-19 \(who.int\)](https://www.who.int/publications/i/item/clinical-management-of-covid-19)
7. Clinical care of severe acute respiratory infections – Tool kit [Internet]. 2022. Retrieved from <https://www.who.int/publications/i/item/clinical-care-of-severe-acute-respiratory-infections-tool-kit>
8. World Health Organization. Post COVID-19 condition. [Internet]. 2022. Retrieved from [Post COVID-19 condition \(who.int\)](https://www.who.int/publications/i/item/post-covid-19-condition)
9. World Health Organization. Rehabilitation and COVID-19. [Internet]. 2022. Retrieved from [Rehabilitation and COVID-19 \(who.int\)](https://www.who.int/publications/i/item/rehabilitation-and-covid-19)
10. World Health Organization. WHO COVID-19 Essential Supplies Forecasting Tools (COVID-ESFT) v 4.1. [Internet]. 2022. Retrieved from [Therapeutics and COVID-19: living guideline \(who.int\)](https://www.who.int/publications/i/item/therapeutics-and-covid-19-living-guideline)
11. World Health Organization. Oxygen -Global [Internet]. 2022. Retrieved from [Oxygen - Global \(who.int\)](https://www.who.int/publications/i/item/oxygen-global)

Infection prevention and control measures for COVID-19 in health care settings

December 2024

Key points

- The WHO Director-General's standing recommendations for COVID-19 advise countries to ensure that infection prevention and control measures are in place for suspected and confirmed COVID-19 cases in clinical settings and that health care providers receive training accordingly and access to personal protective equipment.
- Countries are encouraged to continue delivering optimal clinical care for patients with COVID-19, including maintaining measures to protect patients and health workers.
- Health care settings can amplify infectious disease outbreaks, including COVID-19. Maintaining effective infection prevention and control (IPC) programmes is, therefore, paramount.
- National and sub-national level authorities should maintain readiness to respond to the possibility of future surges of COVID-19 that could overwhelm health systems.

Introduction

Nearly five years since the first SARS-CoV-2 infections were reported, the global COVID-19 situation has changed substantially. With widespread immunity from both vaccination and prior infection, currently circulating variants are now associated with lower severe disease rates and fewer hospitalizations. As a result, most countries have lifted public health and social measures and have moved to end their national COVID-19 emergencies. In this context, many around the world wish to move on and forget their experiences with the COVID-19 pandemic.

COVID-19 continues to circulate widely, however, presenting significant challenges to health systems worldwide. Tens of thousands of people are infected or re-infected with SARS-CoV-2 each week. From mid-September to mid-October 2024, WHO received reports of more than 296 000 confirmed cases of COVID-19 (see the [WHO COVID-19 Dashboard](#)). This figure is certainly an underestimate, as there has been a persistent decline in COVID-19 surveillance and reporting, and wastewater surveillance indicates that circulation is 2–20 times higher than the case numbers that are reported.

It is vital that countries sustain the public health response to COVID-19 amid ongoing illness and death and the emergence of SARS-CoV-2 variants, adapting it to the requirements based on the current COVID-19 situation and risk. Countries are increasingly balancing COVID-19 prevention and response activities with other social and economic priorities.

On 9 August 2023, the WHO Director-General of published [standing recommendations to support ongoing efforts for the prevention and control of COVID-19](#) (1) in accordance with provisions of Articles 16 to 18, and 50 to 53 of the International Health Regulations (2005) (IHR) . These standing recommendations are in effect for all States Parties (WHO Member States plus Liechtenstein and the Holy See) until 30 April 2025 (1).

The updated WHO [Strategic Preparedness and Response plan for 2023-2025](#) (2) is designed to help countries end the emergency phase of the pandemic and shift to comprehensive, long-term management of COVID-19 within broader disease prevention and control programmes. As countries continue to strengthen COVID-19 programmes within their public health systems, two objectives remain critical: 1) reducing the risk of emergence of and controlling the circulation of SARS-CoV-2 variants with increased growth rates and immune escape, with a particular focus on reducing infection in high-risk and vulnerable populations; and 2) diagnosing and treating COVID-19 to reduce mortality, acute severe disease morbidity and long-term sequelae.

Purpose of this document

In 2022 and 2023, WHO released a package of policy briefs designed to help countries formulate policies to manage SARS-CoV-2 transmission, particularly in high-risk and vulnerable populations, and to reduce morbidity, mortality and long-term sequelae from COVID-19. The policy briefs have been updated to reflect current COVID-19 situation and risk and the approaches outlined in the September 2023 WHO document [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (3), and the Director-General's standing recommendations for COVID-19 (1).

The briefs are intended for national and sub-national policy- and decision-makers in ministries of health other governments agencies and partners engaged in and responsible for the health of the populations they serve.

The recommendations in this brief are States based on recommendations published in the document [WHO Infection prevention and control in the context of COVID-19: a guideline, 21 December 2023](#) (4, 5) and other technical documents (e.g. [Global strategy on infection prevention and control](#) (6), [Strategic Preparedness and Response plan for 2023-2025](#) (1) and [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (3). It also emphasizes the need for sustained financing and a trained, protected and respected workforce to maintain these life-saving actions in the context of competing health and non-health emergencies. It additionally recognizes the need to strengthen the acute and longer-term response for COVID-19 in relation to other pressing public health issues.

Essential actions for Member States to consider in adjusting COVID-19 policies

The COVID-19 pandemic revealed significant weaknesses in health care systems, particularly in fragile, conflict-affected and vulnerable settings and among at-risk populations. It underscored the urgent need to enhance infection prevention and control (IPC) programmes and outbreak response capacities, alongside broader reforms for safe and quality care. The WHO Director-General's standing recommendations advise countries to ensure that infection prevention and control measures are in place for suspected and confirmed COVID-19 cases in clinical settings and that health care providers receive training accordingly and access to personal protective equipment. They further recommend implementing measures to protect health workers and care givers as appropriate (1).

While many countries made notable IPC improvements during the pandemic, these were often confined to emergency responses. WHO continues to recommend that all possible efforts to reduce SARS-CoV-2 transmission within health care facilities should continue and be strengthened.

It remains important to focus on the following three key objectives for COVID-19 management and control: elevate the importance of IPC programmes; maintain outbreak readiness and response capacities; and establish and maintain appropriate infrastructure needed for safe health service delivery and a resilient health workforce.

1. Elevate the importance of IPC programmes

At the 77th World Health Assembly in May 2024, a [Global action plan and monitoring framework for infection prevention and control \(IPC\) for 2024–2030](#) was approved to support the implementation of the [Global strategy on infection prevention and control](#) (6). The plan outlines eight strategic directions: political commitment, active IPC programs, integration and coordination, IPC training, data utilization, advocacy, research and stakeholder collaboration (6). The new action plan outlines specific actions, indicators and targets for Member States (as well as other international and national stakeholders and partners) to enhance IPC practices, addressing critical gaps that have historically exacerbated outbreaks in health care settings. Progress will be tracked against targets, including some that should be prioritized whenever possible. These include dedicated IPC and water, sanitation and hygiene (WASH) funds; IPC legislation; and robust surveillance systems for health care-associated infections and antimicrobial resistance (AMR) (6).

For policy makers, the emphasis must be on securing robust political commitment and leadership to implement and sustain effective IPC programs. This involves establishing and enforcing comprehensive legal frameworks, regulations and accreditation systems to ensure that IPC practices are integrated at all levels (5). Mobilizing resources and ensuring sustained financing are crucial to address local needs and support long-term IPC initiatives. By prioritizing these actions, policy makers can drive substantial improvements in infection prevention, protect public health and enhance the resilience of health systems (6).

2. Maintain outbreak readiness and response capacities

Health care facilities can amplify infectious disease outbreaks, including COVID-19, making it paramount to maintain IPC operational readiness (4, 5). Further surges of COVID-19, especially those due to new SARS-CoV-2 variants, could overwhelm health systems.

In the event of a surge, countries should be prepared to convene or reconvene a national task force, including IPC experts, to rapidly review the latest epidemiological and scientific evidence to revise IPC policies and national guidelines, if necessary (7). To maintain readiness, a system for dissemination of this information to support implementation of IPC activities across the health system should be in place. It is crucial to regularly review contingency plans, including human and financial resources, and assess the procurement of supplies needed to effectively implement IPC measures and WASH services in health facilities and community settings (7). Regular testing of the system through simulation or tabletop exercises can help ensure readiness for COVID-19 surges and identify any gaps (6).

Surveillance of health care-associated infections within health facilities is essential for the rapid identification of COVID-19 outbreaks, including among health and care workers, and requires ongoing investment. These outbreaks can amplify transmission both within health care facilities and in communities.

3. Maintain appropriate infrastructure and a resilient workforce

Member States should regularly assess IPC programmes and WASH services in health care facilities using standardized tools. Action plans should be developed, and adequate funding provided to address identified gaps. WHO offers tools to support these efforts ([WASH FIT](#) (8), [IPCAT](#) (9), [IPCAT-MR](#) (10), [SPAR](#) (11)). Investments in health facility infrastructure, such as ventilation systems and waste management, are critical for supporting preparedness, readiness and response activities.

IPC training to prepare for surges of COVID-19 and other emerging high-threat diseases, along with implementing policies to protect health workers (including vaccination, in accordance with national policy), is essential for strengthening capacities and maintaining a resilient health workforce (see [Guide for](#)

[the development and implementation of occupational health and safety programmes for health workers](#)) (12). It is also critical to maintain procurement and supply chain systems for essential items such as hand sanitizer and personal protective equipment that can be scaled up in the event of a COVID-19 upsurge (7).

Finally, policy makers should empower health-facility leadership to enhance IPC and WASH capacities. This includes ensuring the safe flow of patients and staff, implementing COVID-19 screening, ensuring the availability of personal protective equipment and improving the health-care environment to support these measures effectively (6).

Conclusions

As COVID-19 is integrated into broader infectious disease IPC programmes, there is a pressing need to build resilient health systems that address existing gaps in IPC implementation. WHO urges countries to maintain IPC operational readiness to prevent future COVID-19 outbreaks and manage those that arise, while ensuring the sustainability of IPC programmes in the long term to reduce the endemic burden of health care-associated infections and antimicrobial resistance (13).

Plans for updating

WHO will continue to monitor the situation closely for any changes that may affect this policy brief. WHO will issue necessary updates as evidence becomes available and is reviewed.

References

1. Standing recommendations for COVID-19 issue by the Director-General of the World Health Organization (WHO) in accordance with the International Health Regulations (2005) (IHR). Geneva: World Health Organization; 2023. Retrieved from https://cdn.who.int/media/docs/default-source/documents/ihr/covid-19_standing-recommendations_9-august-2023.pdf?sfvrsn=805ad4e4_8&download=true.
2. From emergency response to long-term COVID-19 disease management: sustaining gains made during the COVID-19 pandemic. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/367420>.
3. From emergency response to long-term COVID-19 disease management: ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: guidance on calibrating the response. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/372712>.
4. Infection prevention and control in the context of COVID-19: a guideline, 21 December 2023. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/375200>.
5. Dunn, K., Hurwitz, H.H., Toledo, J.P., Schwaber, M.J., Chu, M., Chou, R., Ford, N., Allegranzi, B. and Baller, A., 2024. Summary of WHO infection prevention and control guideline for covid-19: striving for evidence based practice in infection prevention and control. *bmj*, 385.
6. Global strategy on infection prevention and control. World Health Organization. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/376751>.
7. World Health Organization. Framework and toolkit for infection prevention and control in outbreak preparedness, readiness and response at the national level. Geneva: World Health Organization; 2021. Retrieved from <https://iris.who.int/handle/10665/345251>.
8. (Water and sanitation for health facility improvement tool (WASH FIT): a practical guide for improving quality of care through water, sanitation and hygiene in health care facilities, 2nd

- ed. World Health Organization. World Health Organization & United Nations Children's Fund (UNICEF); 2022. Retrieved from <https://iris.who.int/handle/10665/353411>.
9. Instructions for the national infection prevention and control assessment tool 2 (IPCAT2). Geneva: World Health Organization; 2017. Retrieved from <https://iris.who.int/handle/10665/330078>.
 10. Assessment tool of the minimum requirements for infection prevention and control programmes at the national level. Geneva: World Health Organization; 2021. Retrieved from <https://www.who.int/publications/m/item/assessment-tool-of-the-minimum-requirements-for-infection-prevention-and-control-programmes-at-the-national-level>.
 11. e-SPAR. Geneva: World Health Organization [Website] Retrieved from <https://extranet.who.int/e-spar/>.
 12. Caring for those who care: guide for the development and implementation of occupational health and safety programmes for health workers. World Health Organization & International Labour Organization; 2022. Retrieved from <https://iris.who.int/handle/10665/351436>.
 13. Building health systems resilience for universal health coverage and health security during the COVID-19 pandemic and beyond: WHO position paper. Geneva: World Health Organization; 2021. Retrieved from <https://iris.who.int/handle/10665/346515>.

COVID-19 vaccination

December 2024

Key points

- As per the WHO Director General's standing recommendations, Member States are recommended to continue to offer COVID-19 vaccination based on both the recommendations of the WHO Strategic Advisory Group of Experts on Immunization (SAGE) and on national prioritization informed by cost benefit reviews.
- WHO SAGE recommends a simplified single-dose regimen for immunization for most COVID-19 vaccines in high and medium priority-use groups. This simplified dosing regimen aims to improve acceptance and uptake, while providing adequate protection at a time when most people have had at least one prior SARS-CoV-2 infection.
- Countries are encouraged to explore the periodic re-vaccination of most high priority-use groups and certain sub-populations with special considerations, at an interval of 6–12 months, depending on the group.
- Countries should procure and use monovalent JN.1 lineage-adapted vaccines as they are likely to provide modestly enhanced protection against currently circulating variants. However, vaccination should not be delayed in anticipation of updated variant-containing vaccines as all currently approved COVID-19 vaccines continue to provide protection against severe disease and death.
- Countries are encouraged to use evidence-based and behaviourally informed strategies to increase confidence in and uptake of COVID-19 vaccination, particularly in high priority-use groups. This may include exploring co-administration of COVID-19 and seasonal influenza vaccines.
- WHO recommends integrating COVID-19 vaccination into primary health care and other routine health services.
- Countries and donors should continue to invest in research and development of vaccine products with improved attributes.

Introduction

Nearly five years since the first SARS-CoV-2 infections were reported, the global COVID-19 situation has changed substantially. With widespread immunity from both vaccination and prior infection, currently circulating variants are now associated with lower severe disease rates and fewer hospitalizations. As a result, most countries have lifted public health and social measures and have moved to end their national COVID-19 emergencies. In this context, many around the world wish to move on and forget their experiences with the COVID-19 pandemic.

COVID-19 continues to circulate widely, however, presenting significant challenges to health systems worldwide. Tens of thousands of people are infected or re-infected with SARS-CoV-2 each week. From mid-

September to mid-October 2024, WHO received reports of more than 296 000 confirmed cases of COVID-19 (see the [WHO COVID-19 Dashboard](#)). This figure is certainly an underestimate, as there has been a persistent decline in COVID-19 surveillance and reporting, and wastewater surveillance indicates that circulation is 2–20 times higher than the case numbers that are reported.

It is vital that countries sustain the public health response to COVID-19 amid ongoing illness and death and the emergence of SARS-CoV-2 variants, adapting it to the requirements based on the current COVID-19 situation and risk. Countries are increasingly balancing COVID-19 prevention and response activities with other social and economic priorities.

On 9 August 2023, the WHO Director-General published [standing recommendations to support ongoing efforts for the prevention and control of COVID-19](#) in accordance with provisions of Articles 16 to 18, and 50 to 53 of the International Health Regulations (2005) (IHR) (1). These standing recommendations are in effect for all States Parties (WHO Member States plus Liechtenstein and the Holy See) until 30 April 2025.

The updated WHO [Strategic Preparedness and Response plan for 2023-2025](#) is designed to help countries end the emergency phase of the pandemic and shift to comprehensive, long-term management of COVID-19 within broader disease prevention and control programmes. As countries continue to strengthen COVID-19 programmes within their public health systems, two objectives remain critical: 1) reducing the risk of emergence of and controlling the circulation of SARS-CoV-2 variants with increased growth rates and immune escape, with a particular focus on reducing infection in high-risk and vulnerable populations; and 2) diagnosing and treating COVID-19 to reduce mortality, acute severe disease morbidity and long-term sequelae.

Purpose of this document

In 2022 and 2023, WHO released a package of policy briefs designed to help countries formulate policies to manage SARS-CoV-2 transmission, particularly in high-risk and vulnerable populations, and to reduce morbidity, mortality and long-term sequelae from COVID-19.

The policy briefs have been updated to reflect current COVID-19 situation and risk and the approaches outlined in the September 2023 WHO document [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (2) and the [Director-General's standing recommendations for COVID-19](#) (1).

This policy brief is intended for national and sub-national policy and decision makers in ministries of health other governments agencies and partners engaged in and responsible for the health of the populations they serve. It provides a concise overview of the key recommended actions for Member States to take based on WHO COVID-19 technical guidance and strategies.

Essential actions for Member States to consider in updating COVID-19 vaccination policies and programmatic approaches

Countries should continue to offer COVID-19 vaccination based on the recommendations of the WHO Strategic Advisory Group of Experts on Immunization (SAGE) and on national prioritization informed by cost benefit reviews; and vaccine delivery should be appropriately integrated into health services (1). Countries are encouraged to improve efforts to increase COVID-19 vaccination coverage for all people in high-priority groups using COVID-19 vaccines recommended by WHO or vaccines approved by national regulatory authorities, taking into account SAGE recommendations, and continue surveillance of vaccination uptake and adverse events (1). It is further recommended that countries actively address

vaccine misinformation, disinformation, acceptance and demand issues with communities and health and care providers (1).

1. Revise target groups and schedules based on latest available data and global/regional recommendations

In November 2023, the WHO Strategic Advisory Group of Experts on Immunization (SAGE) updated its [Roadmap for prioritizing uses of COVID-19 vaccines](#), drawing on the latest global epidemiological, vaccine effectiveness and public health impact data (3).

Under the updated roadmap, WHO recommends a simplified single-dose regimen for immunization for most COVID-19 vaccines¹ in high- and medium priority-use groups. This simplified dosing regimen aims to improve acceptance and uptake, while providing adequate protection at a time when most people have had at least one prior SARS-CoV-2 infection. High priority-use groups include older adults² and other adults living with severe obesity or comorbidities that increase their risk of severe COVID-19³. Medium priority-use groups include healthy adults⁴ and children and adolescents living with severe obesity or comorbidities that increase their risk of severe COVID-19⁵. The roadmap outlines distinct vaccination recommendations for several sub-populations with special considerations, notably persons with immunocompromising conditions⁶, pregnant adults and adolescents and health and care workers with direct patient contact. Primary vaccination with one to three doses is recommended depending on the group, based on their risk of severe COVID-19. Vaccination in low priority-use groups, including healthy children and adolescents, can be considered based on country priorities and available resources.

The updated roadmap further recommends the periodic re-vaccination of most high priority-use groups and sub-populations with special considerations at an interval of 6-12 months, depending on the group. Re-vaccination is not routinely recommended for medium and low priority-use groups.

2. Use available vaccine stocks while pursuing access to latest variant-adapted vaccine products

While currently approved COVID-19 vaccines (including monovalent index virus only vaccines, bivalent BA.4/.5 vaccines and monovalent XBB vaccines) continue to provide protection against severe disease and death, the WHO Technical Advisory Group on COVID-19 Vaccine Composition (TAG-CO-VAC) [advised using a monovalent JN.1 lineage as the antigen in future](#) vaccine formulations during its April 2024 meeting (4).

Several COVID-19 vaccine manufacturers are developing or have developed monovalent JN.1 lineage vaccines. These products should become available in late 2024 and 2025. Based on immunogenicity and modelling studies, monovalent JN.1 lineage-containing vaccines are likely to have modestly enhanced vaccine effectiveness compared to monovalent XBB-containing vaccines, bivalent BA.4/.5-containing vaccines and monovalent index virus-only vaccines at a time when JN.1 lineages predominate SARS-CoV-2 circulation. Hence, these vaccines should be used when they become available.

Nevertheless, approved COVID-19 vaccines continue to provide protection against severe disease and death. Hence, any of the WHO emergency use-listed or prequalified COVID-19 vaccines can still be used

¹ Inactivated COVID-19 vaccines still require two doses as initial doses, however.

² Minimum age of 'older adults' to be decided by countries; often it is 50 or 60 years and older.

³ Comorbidities that can put an individual at higher risk of severe COVID-19 can include diabetes, chronic lung disease, and heart, liver, and kidney diseases, among others.

⁴ Age range of 'adults' to be decided by countries; often it is 18–49 or 18–59 years.

⁵ Age range of 'children and adolescents' to be decided by countries; often it is 5–17 years.

⁶ Immunocompromised individuals can include those with active cancer, transplant recipients, those immunodeficient and being actively treated with immunosuppressives, and those living with HIV with a current CD4 cell count of <200 cells/ul, with evidence of opportunistic infection, and not on HIV treatment, and/or with a detectable viral load, among others.

either for primary vaccination or for periodic revaccination if the monovalent JN.1-containing vaccines are unavailable. Vaccination should not be delayed in anticipation of access to variant-containing vaccines as there is a greater benefit in ensuring that persons at high risk of developing severe COVID-19 receive a dose of any available vaccine as compared to delaying vaccination.

3. Accelerate COVID-19 vaccine uptake in high priority-use groups, including periodic revaccination

[The WHO Director-General's standing recommendations for COVID-19](#) emphasize the need to actively address vaccine misinformation, disinformation, acceptance and demand issues with communities and health and care providers (1). [WHO recommends that countries use evidence-based and behaviourally informed strategies to increase confidence in and uptake of COVID-19 vaccination](#), particularly in high priority-use groups (5). This includes the gathering and use of local data on behavioural and social drivers of vaccination to assess root causes of low uptake and to design and evaluate interventions tailored toward high priority-use groups. Interventions to increase trust and uptake can include targeted information campaigns via trusted information sources, partnering with local and community actors to increase community engagement training health and care workers to increase their confidence in recommending COVID-19 vaccination and improvements to delivery strategies to increase the ease of access to vaccination.

Co-administration of COVID-19 vaccines with other vaccines, notably those for seasonal influenza, may increase vaccine uptake by reducing the number of vaccination contacts needed by one person. Further, co-administering vaccines may offer efficiencies in the programmatic delivery of both vaccines, reducing both administrative and programmatic costs. [WHO encourages countries to explore opportunities to co-administer COVID-19 and seasonal influenza vaccines](#) to increase uptake of both vaccines (6).

In addition to the social and behavioral data mentioned above, WHO continues to recommend and request that countries collect, analyse and report COVID-19 vaccine programme implementation data, including data on vaccine uptake in high priority-use groups, vaccination policies, products in use, product procurement and pricing and vaccine safety (7). These data should be used to inform policy and programme decision-making at all levels of the health system.

4. Integrate COVID-19 vaccination with routine health services

Given the latest policy recommendations and current COVID-19 vaccine programme goals, [WHO recommends that countries integrate COVID-19 vaccination into primary health care and other routine health services](#) (8), moving away from mass, campaign-style vaccination. This recommendation reflects shifting vaccination goals, as the focus moves towards reaching high priority-use groups and away from reaching the entire population. From a sustainability perspective, vaccination through routine health services requires fewer human and financial resources as compared to the mass vaccination efforts that characterized the early rollout.

Routinization of COVID-19 vaccination represents an opportunity for health systems to sustain the advances made in vaccination programs during the pandemic while enhancing preparedness, prevention and response capacities against future threats. It promotes the life course approach to vaccination and encourages the development of vaccine delivery platforms for at-risk groups, notably older adults and health and care workers. These delivery platforms can also facilitate the introduction of new adult-targeted vaccines and the 'catchup' of missed doses for other vaccines. WHO recommends that countries assess the new capacities developed and investments made during COVID-19, identifying those that can be sustained and carried forward in service of broader disease control programmes and health system

strength. Examples might include new or reinforced immunization information systems, enhanced cold chain infrastructure and training programmes for health and care workers.

5. Continue to invest in research & development of new vaccine products

Policy makers and donors should consider increasing financial and technical investments in innovations aimed at developing more durable, broadly protective COVID-19 vaccines, including those designed to reduce SARS-CoV-2 transmission and those with attributes for improved delivery. New vaccine products able to substantially reduce SARS-CoV-2 transmission will be critical to reducing the risk of the emergence of new variants and to diminishing the likelihood of resultant new waves of disease. WHO provides guidance for vaccine development [through target product profiles](#) and vaccine composition recommendations (4, 9).

Conclusions

To date, nearly 14 billion doses of COVID-19 vaccines have been administered worldwide. While important disparities persist, nearly all countries have reached high levels of primary COVID-19 immunization coverage. This high level of coverage, combined with the fact that most people have had at least one SARS-CoV-2 infection, has contributed to increased global population immunity.

SARS-CoV-2 continues to evolve, however, and new variants continue to fuel ongoing transmission, resulting in new cases of severe disease and death, especially in high priority-use groups. It is important that countries continue to target high priority-use groups for vaccination. This will require adaptive and resilient approaches to ensure that vaccination programmes remain sustainable, mainly by integrating COVID-19 vaccination into routine health services. It is critical that Member States routinely review and update COVID-19 vaccination policies and programme goals to align with the current epidemiological situation and broader objectives for COVID-19 prevention and control.

Plans for updating

WHO will continue to monitor the situation closely for any changes that may affect this policy brief. WHO will issue necessary updates as evidence becomes available and is reviewed.

References

1. Standing recommendations for COVID-19 issued by the Director-General of the World Health Organization (WHO) in accordance with the International Health Regulations (2005) (IHR). Geneva: World Health Organization; 2023. Retrieved 12 November 2024, from [https://www.who.int/publications/m/item/standing-recommendations-for-covid-19-issued-by-the-director-general-of-the-world-health-organization-\(who\)-in-accordance-with-the-international-health-regulations-\(2005\)-\(ihr\)](https://www.who.int/publications/m/item/standing-recommendations-for-covid-19-issued-by-the-director-general-of-the-world-health-organization-(who)-in-accordance-with-the-international-health-regulations-(2005)-(ihr))
2. Strategic Preparedness and Response Plan: April 2023-April 2025 – From Emergency Response to Long-term COVID-19 Disease Management: Sustaining Gains Made During the COVID-19 Pandemic. Geneva: World Health Organization; 2023. Retrieved 12 November 2024, from <https://www.who.int/publications/i/item/WHO-WHE-SPP-2023.1>
3. WHO SAGE Roadmap for prioritizing uses of COVID-19 vaccines. Geneva: World Health Organization; 2023. Retrieved 23 August 2024, from <https://www.who.int/publications/i/item/WHO-2019-nCoV-Vaccines-SAGE-Prioritization-2023.1>.
4. Statement on the antigen composition of COVID-19 vaccines. Geneva: World Health Organization; 2024. Retrieved 23 August 2024, from <https://www.who.int/news/item/26-04-2024-statement-on-the-antigen-composition-of-covid-19-vaccines>.
5. Increasing COVID-19 vaccination uptake. Geneva: World Health Organization; 2023. Retrieved 23 August 2024, from <https://www.who.int/publications/m/item/increasing-covid-19-vaccination-uptake>.
6. Coadministration of seasonal inactivated influenza and COVID-19 vaccines: Interim guidance. Geneva: World Health Organization; 2021. Retrieved 23 August 2024, from https://www.who.int/publications/i/item/WHO-2019-nCoV-vaccines-SAGE_recommendation-coadministration-influenza-vaccines.
7. Updates to COVID-19 vaccination data reporting requirements. Geneva: World Health Organization, 2023. Retrieved 08 November 2024, from <https://www.technet-21.org/en/resources/guidance/updates-to-covid-19-vaccination-data-reporting-requirements>
8. Considerations for integrating COVID-19 vaccination into immunization programmes and primary health care for 2022 and beyond. Geneva: World Health Organization, 2023. Retrieved 23 August 2024, from <https://www.who.int/publications/i/item/9789240064454>.
9. WHO Target Product Profiles for COVID-19 Vaccines. Revised version April 2022. Geneva: World Health Organization; 2022. Retrieved 23 August 2024, from <https://www.who.int/publications/m/item/who-target-product-profiles-for-covid-19-vaccines>.

Clinical management of COVID-19

December 2024

Key points

- Establishing and sustaining clear pathways to clinical care remains a critical element of the response to COVID-19.
- As per the WHO Director-General's standing recommendations, countries are encouraged to deliver optimal clinical care for COVID-19, appropriately integrated into all levels of health service, including access to proven treatments. Individuals who test positive for SARS-CoV-2 should be immediately linked to a clinical care pathway.
- Countries should adapt COVID-19 clinical care pathways for women who are pregnant or breastfeeding and children.
- Countries are encouraged to provide access to follow-up care to detect post COVID-19 condition (also known as long COVID or PCC).
- Countries should plan for COVID-19 surges using estimation tools for essential supplies, equipment and the work force.

Introduction

Nearly five years since the first SARS-CoV-2 infections were reported, the global COVID-19 situation has changed substantially. With widespread immunity from both vaccination and prior infection, currently circulating variants are now associated with lower severe disease rates and fewer hospitalizations. As a result, most countries have lifted public health and social measures and have moved to end their national COVID-19 emergencies. In this context, many around the world wish to move on and forget their experiences with the COVID-19 pandemic.

COVID-19 continues to circulate widely, however, presenting significant challenges to health systems worldwide. Tens of thousands of people are infected or re-infected with SARS-CoV-2 each week. From mid-September to mid-October 2024, WHO received reports of more than 296 000 confirmed cases of COVID-19 (see the [WHO COVID-19 Dashboard](#)). This figure is certainly an underestimate, as there has been a persistent decline in COVID-19 surveillance and reporting, and wastewater surveillance indicates that circulation is 2–20 times higher than the case numbers that are reported.

It is vital that countries sustain the public health response to COVID-19 amid ongoing illness and death and the emergence of SARS-CoV-2 variants, adapting it to the requirements based on the current COVID-19 situation and risk. Countries are increasingly balancing COVID-19 prevention and response activities with other social and economic priorities.

On 9 August 2023, the WHO Director-General of published [standing recommendations to support ongoing efforts for the prevention and control of COVID-19](#) (1) in accordance with provisions of Articles 16 to 18, and

50 to 53 of the International Health Regulations (2005) (IHR). These standing recommendations are in effect for all States Parties (WHO Member States plus Liechtenstein and the Holy See) until 30 April 2025 (1).

The updated WHO [Strategic Preparedness and Response plan for 2023-2025](#) (2) is designed to help countries end the emergency phase of the pandemic and shift to comprehensive, long-term management of COVID-19 within broader disease prevention and control programmes. As countries continue to strengthen COVID-19 programmes within their public health systems, two objectives remain critical: 1) reducing the risk of emergence of and controlling the circulation of SARS-CoV-2 variants with increased growth rates and immune escape, with a particular focus on reducing infection in high-risk and vulnerable populations; and 2) diagnosing and treating COVID-19 to reduce mortality, acute severe disease morbidity and long-term sequelae.

Purpose of this document

In 2022 and 2023, WHO released a package of policy briefs designed to help countries formulate policies to manage SARS-CoV-2 transmission, particularly in high-risk and vulnerable populations, and to reduce morbidity, mortality and long-term sequelae from COVID-19.

The policy briefs have been updated to reflect the current COVID-19 situation and risk, the approaches outlined in the September 2023 WHO document [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (3) and the Director General's Standing Recommendations for COVID-19 (1).

This policy brief is intended for national and sub-national policy- and decision-makers in ministries of health other governments agencies and partners engaged in and responsible for the health of the populations they serve. It provides a concise overview of the key recommended actions for Member States to take based on WHO COVID-19 technical guidance and strategies.

Essential actions for Member States to consider in adjusting COVID-19 policies

[The WHO Director-General's standing recommendations for COVID-19](#) recommends all Member States to continue to deliver optimal clinical care for COVID-19. They are encouraged to ensure provision, and related scaling-up mechanisms, of appropriate clinical care, with infection prevention and control measures in place, for suspected and confirmed COVID-19 cases in clinical settings.

COVID-19 clinical care should be integrated within health services as appropriate, and access to provision of evidence-based care and health products for patients with acute COVID-19 and post COVID-19 condition should be ensured (1).

1. Integrate COVID-19 clinical care pathways into primary health care systems

Quality clinical care for patients with COVID-19 requires early diagnosis and testing and must be accompanied by appropriate clinical care interventions. Identification and early appropriate treatment of patients at high risk of severe disease can reduce the number of cases of severe disease and hospitalization. Consequently, more lives will be saved.

Member States are advised to follow the World Health Organization (WHO) Living clinical guidelines for COVID-19 to drive policy at national and subnational levels. These guidelines cover [therapeutics](#), [supportive clinical management](#) and [preventative therapy](#). They continuously incorporate emerging evidence from clinical trials on supportive care interventions (such as oxygen and non-invasive ventilation) and therapeutic interventions (such as antivirals and immunomodulators) (4, 6).

These WHO recommendations have been distilled into infographics and training modules: [COVID-19 Clinical Care Pathway](#) (5) and the [Clinical care of severe acute respiratory infections – Tool kit](#) (7). These tools can be incorporated into national and subnational training, as necessary.

2. Ensure individuals who test positive for SARS-Co-2 are immediately linked to a clinical care pathway

Screening and testing protocols should be accessible in all units of the health system. This includes hospital settings, primary care centres and clinics where persons at high risk for severe COVID-19 may seek care. A COVID-19 testing-to-clinical-care linkage should be in place at facilities where noncommunicable diseases and infections, such as HIV, TB and malaria, and conditions causing immunosuppression are managed. In settings where home testing is used, linkages to clinical care and treatments also need to be in place and supported.

3. Ensure access to appropriate clinical interventions and treatments for patients with COVID-19

Access to appropriate clinical interventions and treatments for patients with COVID-19 includes oral antivirals such as nirmatrelvir-ritonavir, molnupiravir or intravenous remdesivir for patients with non-severe disease but who are at high risk of severe disease, based on patient profile and local resources. Patients with severe disease should have access to oxygen therapy, corticosteroids, interleukin-6 inhibitor, and baricitinib, based on patient profile and resources (see [Clinical management of COVID-19: Living guideline, 18 August 2023](#)) (4).

COVID-19 patients who are at greater risk for severe disease and death include older or immunocompromised individuals and those with co-morbidities including hypertension, cardiovascular disease, chronic respiratory disease and diabetes. Following confirmation of SARS-CoV-2 infection, it is critical for patients in these categories to receive prompt access to appropriate clinical interventions and be monitored carefully, including in a hospital, if necessary.

4. Adapt COVID-19 clinical care pathways for women who are pregnant or breastfeeding and children

WHO advises that all pregnant women with a history of contact with a person with confirmed COVID-19 be carefully monitored. Pregnant or recently pregnant women with suspected or confirmed mild or moderate COVID-19 may not require acute care in a hospital, unless there is concern for rapid deterioration or an inability to promptly return to hospital. Isolation to contain virus transmission is recommended and can be done at a health facility, community facility or at home, according to established COVID-19 care pathways. Pregnant or recently pregnant women with severe or critical COVID-19 require acute care in the hospital and specific interventions to improve maternal and foetal survival.

Mothers with suspected or confirmed COVID-19 should be encouraged to initiate and continue breastfeeding. Based on the available evidence, mothers should be counselled that the benefits of breastfeeding substantially outweigh the potential risks of transmission.

In children, the differential diagnosis for respiratory distress is particularly important, and COVID-19 confirmation needs to be made prior to determining severity. Children with suspected or confirmed SARS-CoV-2 infection should be kept together with caregivers wherever possible (if caregivers also have suspected or confirmed SARS-CoV-2 infection) and cared for in child-friendly spaces accounting for their specific medical, nursing, nutritional and mental health and psychosocial support needs. Alternative delivery platforms such as home-based, phone, telemedicine or community outreach teams should be considered to assist with monitoring.

5. Provide access to follow-up care for post COVID-19 condition (also known as long COVID or PCC)

Acute COVID-19 can lead to serious long-term complications, known as post COVID-19 condition. The following symptoms of post COVID-19 condition are common: fatigue, dyspnoea, cough, sleep disturbances, anxiety, depression, cognitive impairment and difficulty concentrating. Any of these symptoms may persist for more than 12 weeks. The needs of patients with post COVID-19 condition will vary, but many will require rehabilitation and other appropriate types of care. Post-acute sequelae of COVID-19 include other medical conditions occurring at a higher-than-expected rate, potentially affecting a wide range of organ systems. The consequences include kidney impairment, heart disease, stroke and others. These needs may stretch existing health systems. National authorities are encouraged to plan and budget for multidisciplinary post COVID-19 condition programmes and adopt sustainable financing to ensure equitable access to relevant therapies.

WHO remains committed to learning more about medium- and long-term outcomes for people with post COVID-19 condition and is developing clinical practice guidelines for management of affected individuals based on new evidence generated by the international medical research community and first responders. A WHO Guideline Development Group consisting of global experts, frontline providers and affected individuals is presently at work on new guidelines on diagnosis, treatment and rehabilitation. WHO-established clinical case definitions and other resources are available at [Post COVID-19 conditions](#) and [Rehabilitation and COVID-19](#) (8, 9).

Member States and funders are urged to support research studies on post COVID-19 condition in the interest of improved understanding of this condition around the world, not just in high-income countries, and design optimal clinical care for patients.

6. Plan for COVID-19 surges

Using estimation tools for essential supplies, equipment and workforce can ensure financial sustainability for the mid- and long-term integration of COVID-19 clinical care pathways into the health system. In countries where oxygen is a limited resource, investing in sustainable large-scale oxygen systems is advisable. Useful resources include: [WHO COVID-19 Essential Supplies Forecasting Tool \(COVID-ESFT\) v4.1](#); and [Oxygen - Global](#) (10, 11).

Conclusions

The policy considerations outlined in this brief come from existing WHO living guidelines which were developed in response to an urgent need for reliable, accessible and regularly updated guidance. These guidelines aim to contextualize emerging findings and provide clear recommendations for clinical practice, informing policy and practice worldwide.

COVID-19 vaccination continues to substantially reduce the risk of severe disease, hospitalization, and death. It also reduces the risk of post COVID-19 condition. However, low vaccine demand and insufficient access to vaccines leave many populations vulnerable and in need of treatment. Establishing and sustaining clear clinical care pathways for COVID-19 remains a crucial element of the public health response.

Plans for updating

WHO will continue to monitor the situation closely for any changes that may affect this policy brief. WHO will issue necessary updates as evidence becomes available and is reviewed.

References

1. Standing recommendations for COVID-19 issue by the Director-General of the World Health Organization (WHO) in accordance with the International Health Regulations (2005) (IHR). Geneva: World Health Organization; 2023. Retrieved from https://cdn.who.int/media/docs/default-source/documents/ihr/covid-19_standing-recommendations_9-august-2023.pdf?sfvrsn=805ad4e4_8&download=true
2. From emergency response to long-term COVID-19 disease management: sustaining gains made during the COVID-19 pandemic. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/367420>
3. From emergency response to long-term COVID-19 disease management: ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: guidance on calibrating the response. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/372712>
4. World Health Organization. Therapeutics and COVID-19: Living Guideline, 18 August 2023. [Internet]. 2023. Retrieved from <https://www.who.int/publications/i/item/WHO-2019-nCoV-clinical-2023.2>
5. World Health Organization. The COVID-19 Clinical Care Pathway [Internet]. 2022. Retrieved from <https://www.who.int/tools/covid-19-clinical-care-pathway>
6. World Health Organization. Clinical management of COVID-19. [Internet]. 2022. Retrieved from [Clinical management of COVID-19 \(who.int\)](https://www.who.int/publications/i/item/clinical-management-of-covid-19)
7. Clinical care of severe acute respiratory infections – Tool kit [Internet]. 2022. Retrieved from <https://www.who.int/publications/i/item/clinical-care-of-severe-acute-respiratory-infections-tool-kit>
8. World Health Organization. Post COVID-19 condition. [Internet]. 2022. Retrieved from [Post COVID-19 condition \(who.int\)](https://www.who.int/publications/i/item/post-covid-19-condition)
9. World Health Organization. Rehabilitation and COVID-19. [Internet]. 2022. Retrieved from [Rehabilitation and COVID-19 \(who.int\)](https://www.who.int/publications/i/item/rehabilitation-and-covid-19)
10. World Health Organization. WHO COVID-19 Essential Supplies Forecasting Tools (COVID-ESFT) v 4.1. [Internet]. 2022. Retrieved from [Therapeutics and COVID-19: living guideline \(who.int\)](https://www.who.int/publications/i/item/therapeutics-and-covid-19-living-guideline)
11. World Health Organization. Oxygen -Global [Internet]. 2022. Retrieved from [Oxygen - Global \(who.int\)](https://www.who.int/publications/i/item/oxygen-global)

Infection prevention and control measures for COVID-19 in health care settings

December 2024

Key points

- The WHO Director-General's standing recommendations for COVID-19 advise countries to ensure that infection prevention and control measures are in place for suspected and confirmed COVID-19 cases in clinical settings and that health care providers receive training accordingly and access to personal protective equipment.
- Countries are encouraged to continue delivering optimal clinical care for patients with COVID-19, including maintaining measures to protect patients and health workers.
- Health care settings can amplify infectious disease outbreaks, including COVID-19. Maintaining effective infection prevention and control (IPC) programmes is, therefore, paramount.
- National and sub-national level authorities should maintain readiness to respond to the possibility of future surges of COVID-19 that could overwhelm health systems.

Introduction

Nearly five years since the first SARS-CoV-2 infections were reported, the global COVID-19 situation has changed substantially. With widespread immunity from both vaccination and prior infection, currently circulating variants are now associated with lower severe disease rates and fewer hospitalizations. As a result, most countries have lifted public health and social measures and have moved to end their national COVID-19 emergencies. In this context, many around the world wish to move on and forget their experiences with the COVID-19 pandemic.

COVID-19 continues to circulate widely, however, presenting significant challenges to health systems worldwide. Tens of thousands of people are infected or re-infected with SARS-CoV-2 each week. From mid-September to mid-October 2024, WHO received reports of more than 296 000 confirmed cases of COVID-19 (see the [WHO COVID-19 Dashboard](#)). This figure is certainly an underestimate, as there has been a persistent decline in COVID-19 surveillance and reporting, and wastewater surveillance indicates that circulation is 2–20 times higher than the case numbers that are reported.

It is vital that countries sustain the public health response to COVID-19 amid ongoing illness and death and the emergence of SARS-CoV-2 variants, adapting it to the requirements based on the current COVID-19 situation and risk. Countries are increasingly balancing COVID-19 prevention and response activities with other social and economic priorities.

On 9 August 2023, the WHO Director-General published [standing recommendations to support ongoing efforts for the prevention and control of COVID-19](#) (1) in accordance with provisions of Articles 16 to 18, and 50 to 53 of the International Health Regulations (2005) (IHR). These standing recommendations are in effect for all States Parties (WHO Member States plus Liechtenstein and the Holy See) until 30 April 2025 (1).

The updated WHO [Strategic Preparedness and Response plan for 2023-2025](#) (2) is designed to help countries end the emergency phase of the pandemic and shift to comprehensive, long-term management of COVID-19 within broader disease prevention and control programmes. As countries continue to strengthen COVID-19 programmes within their public health systems, two objectives remain critical: 1) reducing the risk of emergence of and controlling the circulation of SARS-CoV-2 variants with increased growth rates and immune escape, with a particular focus on reducing infection in high-risk and vulnerable populations; and 2) diagnosing and treating COVID-19 to reduce mortality, acute severe disease morbidity and long-term sequelae.

Purpose of this document

In 2022 and 2023, WHO released a package of policy briefs designed to help countries formulate policies to manage SARS-CoV-2 transmission, particularly in high-risk and vulnerable populations, and to reduce morbidity, mortality and long-term sequelae from COVID-19. The policy briefs have been updated to reflect current COVID-19 situation and risk and the approaches outlined in the September 2023 WHO document [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (3), and the Director-General's standing recommendations for COVID-19 (1).

The briefs are intended for national and sub-national policy- and decision-makers in ministries of health other governments agencies and partners engaged in and responsible for the health of the populations they serve.

The recommendations in this brief are States based on recommendations published in the document [WHO Infection prevention and control in the context of COVID-19: a guideline, 21 December 2023](#) (4, 5) and other technical documents (e.g. [Global strategy on infection prevention and control](#) (6), [Strategic Preparedness and Response plan for 2023-2025](#) (1) and [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (3). It also emphasizes the need for sustained financing and a trained, protected and respected workforce to maintain these life-saving actions in the context of competing health and non-health emergencies. It additionally recognizes the need to strengthen the acute and longer-term response for COVID-19 in relation to other pressing public health issues.

Essential actions for Member States to consider in adjusting COVID-19 policies

The COVID-19 pandemic revealed significant weaknesses in health care systems, particularly in fragile, conflict-affected and vulnerable settings and among at-risk populations. It underscored the urgent need to enhance infection prevention and control (IPC) programmes and outbreak response capacities, alongside broader reforms for safe and quality care. The WHO Director-General's standing recommendations advise countries to ensure that infection prevention and control measures are in place for suspected and confirmed COVID-19 cases in clinical settings and that health care providers receive training accordingly and access to personal protective equipment. They further recommend implementing measures to protect health workers and care givers as appropriate (1).

While many countries made notable IPC improvements during the pandemic, these were often confined to emergency responses. WHO continues to recommend that all possible efforts to reduce SARS-CoV-2 transmission within health care facilities should continue and be strengthened.

It remains important to focus on the following three key objectives for COVID-19 management and control: elevate the importance of IPC programmes; maintain outbreak readiness and response capacities; and establish and maintain appropriate infrastructure needed for safe health service delivery and a resilient health workforce.

1. Elevate the importance of IPC programmes

At the 77th World Health Assembly in May 2024, a [Global action plan and monitoring framework for infection prevention and control \(IPC\) for 2024–2030](#) was approved to support the implementation of the [Global strategy on infection prevention and control](#) (6). The plan outlines eight strategic directions: political commitment, active IPC programs, integration and coordination, IPC training, data utilization, advocacy, research and stakeholder collaboration (6). The new action plan outlines specific actions, indicators and targets for Member States (as well as other international and national stakeholders and partners) to enhance IPC practices, addressing critical gaps that have historically exacerbated outbreaks in health care settings. Progress will be tracked against targets, including some that should be prioritized whenever possible. These include dedicated IPC and water, sanitation and hygiene (WASH) funds; IPC legislation; and robust surveillance systems for health care-associated infections and antimicrobial resistance (AMR) (6).

For policy makers, the emphasis must be on securing robust political commitment and leadership to implement and sustain effective IPC programs. This involves establishing and enforcing comprehensive legal frameworks, regulations and accreditation systems to ensure that IPC practices are integrated at all levels (5). Mobilizing resources and ensuring sustained financing are crucial to address local needs and support long-term IPC initiatives. By prioritizing these actions, policy makers can drive substantial improvements in infection prevention, protect public health and enhance the resilience of health systems (6).

2. Maintain outbreak readiness and response capacities

Health care facilities can amplify infectious disease outbreaks, including COVID-19, making it paramount to maintain IPC operational readiness (4, 5). Further surges of COVID-19, especially those due to new SARS-CoV-2 variants, could overwhelm health systems.

In the event of a surge, countries should be prepared to convene or reconvene a national task force, including IPC experts, to rapidly review the latest epidemiological and scientific evidence to revise IPC policies and national guidelines, if necessary (7). To maintain readiness, a system for dissemination of this information to support implementation of IPC activities across the health system should be in place. It is crucial to regularly review contingency plans, including human and financial resources, and assess the procurement of supplies needed to effectively implement IPC measures and WASH services in health facilities and community settings (7). Regular testing of the system through simulation or tabletop exercises can help ensure readiness for COVID-19 surges and identify any gaps (6).

Surveillance of health care-associated infections within health facilities is essential for the rapid identification of COVID-19 outbreaks, including among health and care workers, and requires ongoing investment. These outbreaks can amplify transmission both within health care facilities and in communities.

3. Maintain appropriate infrastructure and a resilient workforce

Member States should regularly assess IPC programmes and WASH services in health care facilities using standardized tools. Action plans should be developed, and adequate funding provided to address identified gaps. WHO offers tools to support these efforts ([WASH FIT](#) (8), [IPCAT](#) (9), [IPCAT-MR](#) (10), [SPAR](#) (11)). Investments in health facility infrastructure, such as ventilation systems and waste management, are critical for supporting preparedness, readiness and response activities.

IPC training to prepare for surges of COVID-19 and other emerging high-threat diseases, along with implementing policies to protect health workers (including vaccination, in accordance with national policy), is essential for strengthening capacities and maintaining a resilient health workforce (see [Guide for](#)

[the development and implementation of occupational health and safety programmes for health workers](#)) (12). It is also critical to maintain procurement and supply chain systems for essential items such as hand sanitizer and personal protective equipment that can be scaled up in the event of a COVID-19 upsurge (7).

Finally, policy makers should empower health-facility leadership to enhance IPC and WASH capacities. This includes ensuring the safe flow of patients and staff, implementing COVID-19 screening, ensuring the availability of personal protective equipment and improving the health-care environment to support these measures effectively (6).

Conclusions

As COVID-19 is integrated into broader infectious disease IPC programmes, there is a pressing need to build resilient health systems that address existing gaps in IPC implementation. WHO urges countries to maintain IPC operational readiness to prevent future COVID-19 outbreaks and manage those that arise, while ensuring the sustainability of IPC programmes in the long term to reduce the endemic burden of health care-associated infections and antimicrobial resistance (13).

Plans for updating

WHO will continue to monitor the situation closely for any changes that may affect this policy brief. WHO will issue necessary updates as evidence becomes available and is reviewed.

References

1. Standing recommendations for COVID-19 issue by the Director-General of the World Health Organization (WHO) in accordance with the International Health Regulations (2005) (IHR). Geneva: World Health Organization; 2023. Retrieved from https://cdn.who.int/media/docs/default-source/documents/ihr/covid-19_standing-recommendations_9-august-2023.pdf?sfvrsn=805ad4e4_8&download=true.
2. From emergency response to long-term COVID-19 disease management: sustaining gains made during the COVID-19 pandemic. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/367420>.
3. From emergency response to long-term COVID-19 disease management: ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: guidance on calibrating the response. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/372712>.
4. Infection prevention and control in the context of COVID-19: a guideline, 21 December 2023. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/375200>.
5. Dunn, K., Hurwitz, H.H., Toledo, J.P., Schwaber, M.J., Chu, M., Chou, R., Ford, N., Allegranzi, B. and Baller, A., 2024. Summary of WHO infection prevention and control guideline for covid-19: striving for evidence based practice in infection prevention and control. *bmj*, 385.
6. Global strategy on infection prevention and control. World Health Organization. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/376751>.
7. World Health Organization. Framework and toolkit for infection prevention and control in outbreak preparedness, readiness and response at the national level. Geneva: World Health Organization; 2021. Retrieved from <https://iris.who.int/handle/10665/345251>.
8. (Water and sanitation for health facility improvement tool (WASH FIT): a practical guide for improving quality of care through water, sanitation and hygiene in health care facilities, 2nd

- ed. World Health Organization. World Health Organization & United Nations Children's Fund (UNICEF); 2022. Retrieved from <https://iris.who.int/handle/10665/353411>.
9. Instructions for the national infection prevention and control assessment tool 2 (IPCAT2). Geneva: World Health Organization; 2017. Retrieved from <https://iris.who.int/handle/10665/330078>.
 10. Assessment tool of the minimum requirements for infection prevention and control programmes at the national level. Geneva: World Health Organization; 2021. Retrieved from <https://www.who.int/publications/m/item/assessment-tool-of-the-minimum-requirements-for-infection-prevention-and-control-programmes-at-the-national-level>.
 11. e-SPAR. Geneva: World Health Organization [Website] Retrieved from <https://extranet.who.int/e-spar/>.
 12. Caring for those who care: guide for the development and implementation of occupational health and safety programmes for health workers. World Health Organization & International Labour Organization; 2022. Retrieved from <https://iris.who.int/handle/10665/351436>.
 13. Building health systems resilience for universal health coverage and health security during the COVID-19 pandemic and beyond: WHO position paper. Geneva: World Health Organization; 2021. Retrieved from <https://iris.who.int/handle/10665/346515>.

COVID-19 vaccination

December 2024

Key points

- As per the WHO Director General's standing recommendations, Member States are recommended to continue to offer COVID-19 vaccination based on both the recommendations of the WHO Strategic Advisory Group of Experts on Immunization (SAGE) and on national prioritization informed by cost benefit reviews.
- WHO SAGE recommends a simplified single-dose regimen for immunization for most COVID-19 vaccines in high and medium priority-use groups. This simplified dosing regimen aims to improve acceptance and uptake, while providing adequate protection at a time when most people have had at least one prior SARS-CoV-2 infection.
- Countries are encouraged to explore the periodic re-vaccination of most high priority-use groups and certain sub-populations with special considerations, at an interval of 6–12 months, depending on the group.
- Countries should procure and use monovalent JN.1 lineage-adapted vaccines as they are likely to provide modestly enhanced protection against currently circulating variants. However, vaccination should not be delayed in anticipation of updated variant-containing vaccines as all currently approved COVID-19 vaccines continue to provide protection against severe disease and death.
- Countries are encouraged to use evidence-based and behaviourally informed strategies to increase confidence in and uptake of COVID-19 vaccination, particularly in high priority-use groups. This may include exploring co-administration of COVID-19 and seasonal influenza vaccines.
- WHO recommends integrating COVID-19 vaccination into primary health care and other routine health services.
- Countries and donors should continue to invest in research and development of vaccine products with improved attributes.

Introduction

Nearly five years since the first SARS-CoV-2 infections were reported, the global COVID-19 situation has changed substantially. With widespread immunity from both vaccination and prior infection, currently circulating variants are now associated with lower severe disease rates and fewer hospitalizations. As a result, most countries have lifted public health and social measures and have moved to end their national COVID-19 emergencies. In this context, many around the world wish to move on and forget their experiences with the COVID-19 pandemic.

COVID-19 continues to circulate widely, however, presenting significant challenges to health systems worldwide. Tens of thousands of people are infected or re-infected with SARS-CoV-2 each week. From mid-

September to mid-October 2024, WHO received reports of more than 296 000 confirmed cases of COVID-19 (see the [WHO COVID-19 Dashboard](#)). This figure is certainly an underestimate, as there has been a persistent decline in COVID-19 surveillance and reporting, and wastewater surveillance indicates that circulation is 2–20 times higher than the case numbers that are reported.

It is vital that countries sustain the public health response to COVID-19 amid ongoing illness and death and the emergence of SARS-CoV-2 variants, adapting it to the requirements based on the current COVID-19 situation and risk. Countries are increasingly balancing COVID-19 prevention and response activities with other social and economic priorities.

On 9 August 2023, the WHO Director-General published [standing recommendations to support ongoing efforts for the prevention and control of COVID-19](#) in accordance with provisions of Articles 16 to 18, and 50 to 53 of the International Health Regulations (2005) (IHR) (1). These standing recommendations are in effect for all States Parties (WHO Member States plus Liechtenstein and the Holy See) until 30 April 2025.

The updated WHO [Strategic Preparedness and Response plan for 2023-2025](#) is designed to help countries end the emergency phase of the pandemic and shift to comprehensive, long-term management of COVID-19 within broader disease prevention and control programmes. As countries continue to strengthen COVID-19 programmes within their public health systems, two objectives remain critical: 1) reducing the risk of emergence of and controlling the circulation of SARS-CoV-2 variants with increased growth rates and immune escape, with a particular focus on reducing infection in high-risk and vulnerable populations; and 2) diagnosing and treating COVID-19 to reduce mortality, acute severe disease morbidity and long-term sequelae.

Purpose of this document

In 2022 and 2023, WHO released a package of policy briefs designed to help countries formulate policies to manage SARS-CoV-2 transmission, particularly in high-risk and vulnerable populations, and to reduce morbidity, mortality and long-term sequelae from COVID-19.

The policy briefs have been updated to reflect current COVID-19 situation and risk and the approaches outlined in the September 2023 WHO document [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (2) and the [Director-General's standing recommendations for COVID-19](#) (1).

This policy brief is intended for national and sub-national policy and decision makers in ministries of health other governments agencies and partners engaged in and responsible for the health of the populations they serve. It provides a concise overview of the key recommended actions for Member States to take based on WHO COVID-19 technical guidance and strategies.

Essential actions for Member States to consider in updating COVID-19 vaccination policies and programmatic approaches

Countries should continue to offer COVID-19 vaccination based on the recommendations of the WHO Strategic Advisory Group of Experts on Immunization (SAGE) and on national prioritization informed by cost benefit reviews; and vaccine delivery should be appropriately integrated into health services (1). Countries are encouraged to improve efforts to increase COVID-19 vaccination coverage for all people in high-priority groups using COVID-19 vaccines recommended by WHO or vaccines approved by national regulatory authorities, taking into account SAGE recommendations, and continue surveillance of vaccination uptake and adverse events (1). It is further recommended that countries actively address

vaccine misinformation, disinformation, acceptance and demand issues with communities and health and care providers (1).

1. Revise target groups and schedules based on latest available data and global/regional recommendations

In November 2023, the WHO Strategic Advisory Group of Experts on Immunization (SAGE) updated its [Roadmap for prioritizing uses of COVID-19 vaccines](#), drawing on the latest global epidemiological, vaccine effectiveness and public health impact data (3).

Under the updated roadmap, WHO recommends a simplified single-dose regimen for immunization for most COVID-19 vaccines¹ in high- and medium priority-use groups. This simplified dosing regimen aims to improve acceptance and uptake, while providing adequate protection at a time when most people have had at least one prior SARS-CoV-2 infection. High priority-use groups include older adults² and other adults living with severe obesity or comorbidities that increase their risk of severe COVID-19³. Medium priority-use groups include healthy adults⁴ and children and adolescents living with severe obesity or comorbidities that increase their risk of severe COVID-19⁵. The roadmap outlines distinct vaccination recommendations for several sub-populations with special considerations, notably persons with immunocompromising conditions⁶, pregnant adults and adolescents and health and care workers with direct patient contact. Primary vaccination with one to three doses is recommended depending on the group, based on their risk of severe COVID-19. Vaccination in low priority-use groups, including healthy children and adolescents, can be considered based on country priorities and available resources.

The updated roadmap further recommends the periodic re-vaccination of most high priority-use groups and sub-populations with special considerations at an interval of 6-12 months, depending on the group. Re-vaccination is not routinely recommended for medium and low priority-use groups.

2. Use available vaccine stocks while pursuing access to latest variant-adapted vaccine products

While currently approved COVID-19 vaccines (including monovalent index virus only vaccines, bivalent BA.4/.5 vaccines and monovalent XBB vaccines) continue to provide protection against severe disease and death, the WHO Technical Advisory Group on COVID-19 Vaccine Composition (TAG-CO-VAC) [advised using a monovalent JN.1 lineage as the antigen in future](#) vaccine formulations during its April 2024 meeting (4).

Several COVID-19 vaccine manufacturers are developing or have developed monovalent JN.1 lineage vaccines. These products should become available in late 2024 and 2025. Based on immunogenicity and modelling studies, monovalent JN.1 lineage-containing vaccines are likely to have modestly enhanced vaccine effectiveness compared to monovalent XBB-containing vaccines, bivalent BA.4/.5-containing vaccines and monovalent index virus-only vaccines at a time when JN.1 lineages predominate SARS-CoV-2 circulation. Hence, these vaccines should be used when they become available.

Nevertheless, approved COVID-19 vaccines continue to provide protection against severe disease and death. Hence, any of the WHO emergency use-listed or prequalified COVID-19 vaccines can still be used

¹ Inactivated COVID-19 vaccines still require two doses as initial doses, however.

² Minimum age of 'older adults' to be decided by countries; often it is 50 or 60 years and older.

³ Comorbidities that can put an individual at higher risk of severe COVID-19 can include diabetes, chronic lung disease, and heart, liver, and kidney diseases, among others.

⁴ Age range of 'adults' to be decided by countries; often it is 18–49 or 18–59 years.

⁵ Age range of 'children and adolescents' to be decided by countries; often it is 5–17 years.

⁶ Immunocompromised individuals can include those with active cancer, transplant recipients, those immunodeficient and being actively treated with immunosuppressives, and those living with HIV with a current CD4 cell count of <200 cells/ul, with evidence of opportunistic infection, and not on HIV treatment, and/or with a detectable viral load, among others.

either for primary vaccination or for periodic revaccination if the monovalent JN.1-containing vaccines are unavailable. Vaccination should not be delayed in anticipation of access to variant-containing vaccines as there is a greater benefit in ensuring that persons at high risk of developing severe COVID-19 receive a dose of any available vaccine as compared to delaying vaccination.

3. Accelerate COVID-19 vaccine uptake in high priority-use groups, including periodic revaccination

[The WHO Director-General's standing recommendations for COVID-19](#) emphasize the need to actively address vaccine misinformation, disinformation, acceptance and demand issues with communities and health and care providers (1). [WHO recommends that countries use evidence-based and behaviourally informed strategies to increase confidence in and uptake of COVID-19 vaccination](#), particularly in high priority-use groups (5). This includes the gathering and use of local data on behavioural and social drivers of vaccination to assess root causes of low uptake and to design and evaluate interventions tailored toward high priority-use groups. Interventions to increase trust and uptake can include targeted information campaigns via trusted information sources, partnering with local and community actors to increase community engagement training health and care workers to increase their confidence in recommending COVID-19 vaccination and improvements to delivery strategies to increase the ease of access to vaccination.

Co-administration of COVID-19 vaccines with other vaccines, notably those for seasonal influenza, may increase vaccine uptake by reducing the number of vaccination contacts needed by one person. Further, co-administering vaccines may offer efficiencies in the programmatic delivery of both vaccines, reducing both administrative and programmatic costs. [WHO encourages countries to explore opportunities to co-administer COVID-19 and seasonal influenza vaccines](#) to increase uptake of both vaccines (6).

In addition to the social and behavioral data mentioned above, WHO continues to recommend and request that countries collect, analyse and report COVID-19 vaccine programme implementation data, including data on vaccine uptake in high priority-use groups, vaccination policies, products in use, product procurement and pricing and vaccine safety (7). These data should be used to inform policy and programme decision-making at all levels of the health system.

4. Integrate COVID-19 vaccination with routine health services

Given the latest policy recommendations and current COVID-19 vaccine programme goals, [WHO recommends that countries integrate COVID-19 vaccination into primary health care and other routine health services](#) (8), moving away from mass, campaign-style vaccination. This recommendation reflects shifting vaccination goals, as the focus moves towards reaching high priority-use groups and away from reaching the entire population. From a sustainability perspective, vaccination through routine health services requires fewer human and financial resources as compared to the mass vaccination efforts that characterized the early rollout.

Routinization of COVID-19 vaccination represents an opportunity for health systems to sustain the advances made in vaccination programs during the pandemic while enhancing preparedness, prevention and response capacities against future threats. It promotes the life course approach to vaccination and encourages the development of vaccine delivery platforms for at-risk groups, notably older adults and health and care workers. These delivery platforms can also facilitate the introduction of new adult-targeted vaccines and the 'catchup' of missed doses for other vaccines. WHO recommends that countries assess the new capacities developed and investments made during COVID-19, identifying those that can be sustained and carried forward in service of broader disease control programmes and health system

strength. Examples might include new or reinforced immunization information systems, enhanced cold chain infrastructure and training programmes for health and care workers.

5. Continue to invest in research & development of new vaccine products

Policy makers and donors should consider increasing financial and technical investments in innovations aimed at developing more durable, broadly protective COVID-19 vaccines, including those designed to reduce SARS-CoV-2 transmission and those with attributes for improved delivery. New vaccine products able to substantially reduce SARS-CoV-2 transmission will be critical to reducing the risk of the emergence of new variants and to diminishing the likelihood of resultant new waves of disease. WHO provides guidance for vaccine development [through target product profiles](#) and vaccine composition recommendations (4, 9).

Conclusions

To date, nearly 14 billion doses of COVID-19 vaccines have been administered worldwide. While important disparities persist, nearly all countries have reached high levels of primary COVID-19 immunization coverage. This high level of coverage, combined with the fact that most people have had at least one SARS-CoV-2 infection, has contributed to increased global population immunity.

SARS-CoV-2 continues to evolve, however, and new variants continue to fuel ongoing transmission, resulting in new cases of severe disease and death, especially in high priority-use groups. It is important that countries continue to target high priority-use groups for vaccination. This will require adaptive and resilient approaches to ensure that vaccination programmes remain sustainable, mainly by integrating COVID-19 vaccination into routine health services. It is critical that Member States routinely review and update COVID-19 vaccination policies and programme goals to align with the current epidemiological situation and broader objectives for COVID-19 prevention and control.

Plans for updating

WHO will continue to monitor the situation closely for any changes that may affect this policy brief. WHO will issue necessary updates as evidence becomes available and is reviewed.

References

1. Standing recommendations for COVID-19 issued by the Director-General of the World Health Organization (WHO) in accordance with the International Health Regulations (2005) (IHR). Geneva: World Health Organization; 2023. Retrieved 12 November 2024, from [https://www.who.int/publications/m/item/standing-recommendations-for-covid-19-issued-by-the-director-general-of-the-world-health-organization-\(who\)-in-accordance-with-the-international-health-regulations-\(2005\)-\(ihr\)](https://www.who.int/publications/m/item/standing-recommendations-for-covid-19-issued-by-the-director-general-of-the-world-health-organization-(who)-in-accordance-with-the-international-health-regulations-(2005)-(ihr))
2. Strategic Preparedness and Response Plan: April 2023-April 2025 – From Emergency Response to Long-term COVID-19 Disease Management: Sustaining Gains Made During the COVID-19 Pandemic. Geneva: World Health Organization; 2023. Retrieved 12 November 2024, from <https://www.who.int/publications/i/item/WHO-WHE-SPP-2023.1>
3. WHO SAGE Roadmap for prioritizing uses of COVID-19 vaccines. Geneva: World Health Organization; 2023. Retrieved 23 August 2024, from <https://www.who.int/publications/i/item/WHO-2019-nCoV-Vaccines-SAGE-Prioritization-2023.1>.
4. Statement on the antigen composition of COVID-19 vaccines. Geneva: World Health Organization; 2024. Retrieved 23 August 2024, from <https://www.who.int/news/item/26-04-2024-statement-on-the-antigen-composition-of-covid-19-vaccines>.
5. Increasing COVID-19 vaccination uptake. Geneva: World Health Organization; 2023. Retrieved 23 August 2024, from <https://www.who.int/publications/m/item/increasing-covid-19-vaccination-uptake>.
6. Coadministration of seasonal inactivated influenza and COVID-19 vaccines: Interim guidance. Geneva: World Health Organization; 2021. Retrieved 23 August 2024, from https://www.who.int/publications/i/item/WHO-2019-nCoV-vaccines-SAGE_recommendation-coadministration-influenza-vaccines.
7. Updates to COVID-19 vaccination data reporting requirements. Geneva: World Health Organization, 2023. Retrieved 08 November 2024, from <https://www.technet-21.org/en/resources/guidance/updates-to-covid-19-vaccination-data-reporting-requirements>
8. Considerations for integrating COVID-19 vaccination into immunization programmes and primary health care for 2022 and beyond. Geneva: World Health Organization, 2023. Retrieved 23 August 2024, from <https://www.who.int/publications/i/item/9789240064454>.
9. WHO Target Product Profiles for COVID-19 Vaccines. Revised version April 2022. Geneva: World Health Organization; 2022. Retrieved 23 August 2024, from <https://www.who.int/publications/m/item/who-target-product-profiles-for-covid-19-vaccines>.

Clinical management of COVID-19

December 2024

Key points

- Establishing and sustaining clear pathways to clinical care remains a critical element of the response to COVID-19.
- As per the WHO Director-General's standing recommendations, countries are encouraged to deliver optimal clinical care for COVID-19, appropriately integrated into all levels of health service, including access to proven treatments. Individuals who test positive for SARS-CoV-2 should be immediately linked to a clinical care pathway.
- Countries should adapt COVID-19 clinical care pathways for women who are pregnant or breastfeeding and children.
- Countries are encouraged to provide access to follow-up care to detect post COVID-19 condition (also known as long COVID or PCC).
- Countries should plan for COVID-19 surges using estimation tools for essential supplies, equipment and the work force.

Introduction

Nearly five years since the first SARS-CoV-2 infections were reported, the global COVID-19 situation has changed substantially. With widespread immunity from both vaccination and prior infection, currently circulating variants are now associated with lower severe disease rates and fewer hospitalizations. As a result, most countries have lifted public health and social measures and have moved to end their national COVID-19 emergencies. In this context, many around the world wish to move on and forget their experiences with the COVID-19 pandemic.

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It is vital that countries sustain the public health response to COVID-19 amid ongoing illness and death and the emergence of SARS-CoV-2 variants, adapting it to the requirements based on the current COVID-19 situation and risk. Countries are increasingly balancing COVID-19 prevention and response activities with other social and economic priorities.

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Purpose of this document

In 2022 and 2023, WHO released a package of policy briefs designed to help countries formulate policies to manage SARS-CoV-2 transmission, particularly in high-risk and vulnerable populations, and to reduce morbidity, mortality and long-term sequelae from COVID-19.

The policy briefs have been updated to reflect the current COVID-19 situation and risk, the approaches outlined in the September 2023 WHO document [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (3) and the Director General's Standing Recommendations for COVID-19 (1).

This policy brief is intended for national and sub-national policy- and decision-makers in ministries of health other governments agencies and partners engaged in and responsible for the health of the populations they serve. It provides a concise overview of the key recommended actions for Member States to take based on WHO COVID-19 technical guidance and strategies.

Essential actions for Member States to consider in adjusting COVID-19 policies

[The WHO Director-General's standing recommendations for COVID-19](#) recommends all Member States to continue to deliver optimal clinical care for COVID-19. They are encouraged to ensure provision, and related scaling-up mechanisms, of appropriate clinical care, with infection prevention and control measures in place, for suspected and confirmed COVID-19 cases in clinical settings.

COVID-19 clinical care should be integrated within health services as appropriate, and access to provision of evidence-based care and health products for patients with acute COVID-19 and post COVID-19 condition should be ensured (1).

1. Integrate COVID-19 clinical care pathways into primary health care systems

Quality clinical care for patients with COVID-19 requires early diagnosis and testing and must be accompanied by appropriate clinical care interventions. Identification and early appropriate treatment of patients at high risk of severe disease can reduce the number of cases of severe disease and hospitalization. Consequently, more lives will be saved.

Member States are advised to follow the World Health Organization (WHO) Living clinical guidelines for COVID-19 to drive policy at national and subnational levels. These guidelines cover [therapeutics](#), [supportive clinical management](#) and [preventative therapy](#). They continuously incorporate emerging evidence from clinical trials on supportive care interventions (such as oxygen and non-invasive ventilation) and therapeutic interventions (such as antivirals and immunomodulators) (4, 6).

These WHO recommendations have been distilled into infographics and training modules: [COVID-19 Clinical Care Pathway](#) (5) and the [Clinical care of severe acute respiratory infections – Tool kit](#) (7). These tools can be incorporated into national and subnational training, as necessary.

2. Ensure individuals who test positive for SARS-Co-2 are immediately linked to a clinical care pathway

Screening and testing protocols should be accessible in all units of the health system. This includes hospital settings, primary care centres and clinics where persons at high risk for severe COVID-19 may seek care. A COVID-19 testing-to-clinical-care linkage should be in place at facilities where noncommunicable diseases and infections, such as HIV, TB and malaria, and conditions causing immunosuppression are managed. In settings where home testing is used, linkages to clinical care and treatments also need to be in place and supported.

3. Ensure access to appropriate clinical interventions and treatments for patients with COVID-19

Access to appropriate clinical interventions and treatments for patients with COVID-19 includes oral antivirals such as nirmatrelvir-ritonavir, molnupiravir or intravenous remdesivir for patients with non-severe disease but who are at high risk of severe disease, based on patient profile and local resources. Patients with severe disease should have access to oxygen therapy, corticosteroids, interleukin-6 inhibitor, and baricitinib, based on patient profile and resources (see [Clinical management of COVID-19: Living guideline, 18 August 2023](#)) (4).

COVID-19 patients who are at greater risk for severe disease and death include older or immunocompromised individuals and those with co-morbidities including hypertension, cardiovascular disease, chronic respiratory disease and diabetes. Following confirmation of SARS-CoV-2 infection, it is critical for patients in these categories to receive prompt access to appropriate clinical interventions and be monitored carefully, including in a hospital, if necessary.

4. Adapt COVID-19 clinical care pathways for women who are pregnant or breastfeeding and children

WHO advises that all pregnant women with a history of contact with a person with confirmed COVID-19 be carefully monitored. Pregnant or recently pregnant women with suspected or confirmed mild or moderate COVID-19 may not require acute care in a hospital, unless there is concern for rapid deterioration or an inability to promptly return to hospital. Isolation to contain virus transmission is recommended and can be done at a health facility, community facility or at home, according to established COVID-19 care pathways. Pregnant or recently pregnant women with severe or critical COVID-19 require acute care in the hospital and specific interventions to improve maternal and foetal survival.

Mothers with suspected or confirmed COVID-19 should be encouraged to initiate and continue breastfeeding. Based on the available evidence, mothers should be counselled that the benefits of breastfeeding substantially outweigh the potential risks of transmission.

In children, the differential diagnosis for respiratory distress is particularly important, and COVID-19 confirmation needs to be made prior to determining severity. Children with suspected or confirmed SARS-CoV-2 infection should be kept together with caregivers wherever possible (if caregivers also have suspected or confirmed SARS-CoV-2 infection) and cared for in child-friendly spaces accounting for their specific medical, nursing, nutritional and mental health and psychosocial support needs. Alternative delivery platforms such as home-based, phone, telemedicine or community outreach teams should be considered to assist with monitoring.

5. Provide access to follow-up care for post COVID-19 condition (also known as long COVID or PCC)

Acute COVID-19 can lead to serious long-term complications, known as post COVID-19 condition. The following symptoms of post COVID-19 condition are common: fatigue, dyspnoea, cough, sleep disturbances, anxiety, depression, cognitive impairment and difficulty concentrating. Any of these symptoms may persist for more than 12 weeks. The needs of patients with post COVID-19 condition will vary, but many will require rehabilitation and other appropriate types of care. Post-acute sequelae of COVID-19 include other medical conditions occurring at a higher-than-expected rate, potentially affecting a wide range of organ systems. The consequences include kidney impairment, heart disease, stroke and others. These needs may stretch existing health systems. National authorities are encouraged to plan and budget for multidisciplinary post COVID-19 condition programmes and adopt sustainable financing to ensure equitable access to relevant therapies.

WHO remains committed to learning more about medium- and long-term outcomes for people with post COVID-19 condition and is developing clinical practice guidelines for management of affected individuals based on new evidence generated by the international medical research community and first responders. A WHO Guideline Development Group consisting of global experts, frontline providers and affected individuals is presently at work on new guidelines on diagnosis, treatment and rehabilitation. WHO-established clinical case definitions and other resources are available at [Post COVID-19 conditions](#) and [Rehabilitation and COVID-19](#) (8, 9).

Member States and funders are urged to support research studies on post COVID-19 condition in the interest of improved understanding of this condition around the world, not just in high-income countries, and design optimal clinical care for patients.

6. Plan for COVID-19 surges

Using estimation tools for essential supplies, equipment and workforce can ensure financial sustainability for the mid- and long-term integration of COVID-19 clinical care pathways into the health system. In countries where oxygen is a limited resource, investing in sustainable large-scale oxygen systems is advisable. Useful resources include: [WHO COVID-19 Essential Supplies Forecasting Tool \(COVID-ESFT\) v4.1](#); and [Oxygen - Global](#) (10, 11).

Conclusions

The policy considerations outlined in this brief come from existing WHO living guidelines which were developed in response to an urgent need for reliable, accessible and regularly updated guidance. These guidelines aim to contextualize emerging findings and provide clear recommendations for clinical practice, informing policy and practice worldwide.

COVID-19 vaccination continues to substantially reduce the risk of severe disease, hospitalization, and death. It also reduces the risk of post COVID-19 condition. However, low vaccine demand and insufficient access to vaccines leave many populations vulnerable and in need of treatment. Establishing and sustaining clear clinical care pathways for COVID-19 remains a crucial element of the public health response.

Plans for updating

WHO will continue to monitor the situation closely for any changes that may affect this policy brief. WHO will issue necessary updates as evidence becomes available and is reviewed.

References

1. Standing recommendations for COVID-19 issue by the Director-General of the World Health Organization (WHO) in accordance with the International Health Regulations (2005) (IHR). Geneva: World Health Organization; 2023. Retrieved from https://cdn.who.int/media/docs/default-source/documents/ihr/covid-19_standing-recommendations_9-august-2023.pdf?sfvrsn=805ad4e4_8&download=true
2. From emergency response to long-term COVID-19 disease management: sustaining gains made during the COVID-19 pandemic. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/367420>
3. From emergency response to long-term COVID-19 disease management: ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: guidance on calibrating the response. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/372712>
4. World Health Organization. Therapeutics and COVID-19: Living Guideline, 18 August 2023. [Internet]. 2023. Retrieved from <https://www.who.int/publications/i/item/WHO-2019-nCoV-clinical-2023.2>
5. World Health Organization. The COVID-19 Clinical Care Pathway [Internet]. 2022. Retrieved from <https://www.who.int/tools/covid-19-clinical-care-pathway>
6. World Health Organization. Clinical management of COVID-19. [Internet]. 2022. Retrieved from [Clinical management of COVID-19 \(who.int\)](https://www.who.int/publications/i/item/clinical-management-of-covid-19)
7. Clinical care of severe acute respiratory infections – Tool kit [Internet]. 2022. Retrieved from <https://www.who.int/publications/i/item/clinical-care-of-severe-acute-respiratory-infections-tool-kit>
8. World Health Organization. Post COVID-19 condition. [Internet]. 2022. Retrieved from [Post COVID-19 condition \(who.int\)](https://www.who.int/publications/i/item/post-covid-19-condition)
9. World Health Organization. Rehabilitation and COVID-19. [Internet]. 2022. Retrieved from [Rehabilitation and COVID-19 \(who.int\)](https://www.who.int/publications/i/item/rehabilitation-and-covid-19)
10. World Health Organization. WHO COVID-19 Essential Supplies Forecasting Tools (COVID-ESFT) v 4.1. [Internet]. 2022. Retrieved from [Therapeutics and COVID-19: living guideline \(who.int\)](https://www.who.int/publications/i/item/therapeutics-and-covid-19-living-guideline)
11. World Health Organization. Oxygen -Global [Internet]. 2022. Retrieved from [Oxygen - Global \(who.int\)](https://www.who.int/publications/i/item/oxygen-global)

Infection prevention and control measures for COVID-19 in health care settings

December 2024

Key points

- The WHO Director-General's standing recommendations for COVID-19 advise countries to ensure that infection prevention and control measures are in place for suspected and confirmed COVID-19 cases in clinical settings and that health care providers receive training accordingly and access to personal protective equipment.
- Countries are encouraged to continue delivering optimal clinical care for patients with COVID-19, including maintaining measures to protect patients and health workers.
- Health care settings can amplify infectious disease outbreaks, including COVID-19. Maintaining effective infection prevention and control (IPC) programmes is, therefore, paramount.
- National and sub-national level authorities should maintain readiness to respond to the possibility of future surges of COVID-19 that could overwhelm health systems.

Introduction

Nearly five years since the first SARS-CoV-2 infections were reported, the global COVID-19 situation has changed substantially. With widespread immunity from both vaccination and prior infection, currently circulating variants are now associated with lower severe disease rates and fewer hospitalizations. As a result, most countries have lifted public health and social measures and have moved to end their national COVID-19 emergencies. In this context, many around the world wish to move on and forget their experiences with the COVID-19 pandemic.

COVID-19 continues to circulate widely, however, presenting significant challenges to health systems worldwide. Tens of thousands of people are infected or re-infected with SARS-CoV-2 each week. From mid-September to mid-October 2024, WHO received reports of more than 296 000 confirmed cases of COVID-19 (see the [WHO COVID-19 Dashboard](#)). This figure is certainly an underestimate, as there has been a persistent decline in COVID-19 surveillance and reporting, and wastewater surveillance indicates that circulation is 2–20 times higher than the case numbers that are reported.

It is vital that countries sustain the public health response to COVID-19 amid ongoing illness and death and the emergence of SARS-CoV-2 variants, adapting it to the requirements based on the current COVID-19 situation and risk. Countries are increasingly balancing COVID-19 prevention and response activities with other social and economic priorities.

On 9 August 2023, the WHO Director-General of published [standing recommendations to support ongoing efforts for the prevention and control of COVID-19](#) (1) in accordance with provisions of Articles 16 to 18, and 50 to 53 of the International Health Regulations (2005) (IHR) . These standing recommendations are in effect for all States Parties (WHO Member States plus Liechtenstein and the Holy See) until 30 April 2025 (1).

The updated WHO [Strategic Preparedness and Response plan for 2023-2025](#) (2) is designed to help countries end the emergency phase of the pandemic and shift to comprehensive, long-term management of COVID-19 within broader disease prevention and control programmes. As countries continue to strengthen COVID-19 programmes within their public health systems, two objectives remain critical: 1) reducing the risk of emergence of and controlling the circulation of SARS-CoV-2 variants with increased growth rates and immune escape, with a particular focus on reducing infection in high-risk and vulnerable populations; and 2) diagnosing and treating COVID-19 to reduce mortality, acute severe disease morbidity and long-term sequelae.

Purpose of this document

In 2022 and 2023, WHO released a package of policy briefs designed to help countries formulate policies to manage SARS-CoV-2 transmission, particularly in high-risk and vulnerable populations, and to reduce morbidity, mortality and long-term sequelae from COVID-19. The policy briefs have been updated to reflect current COVID-19 situation and risk and the approaches outlined in the September 2023 WHO document [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (3), and the Director-General's standing recommendations for COVID-19 (1).

The briefs are intended for national and sub-national policy- and decision-makers in ministries of health other governments agencies and partners engaged in and responsible for the health of the populations they serve.

The recommendations in this brief are States based on recommendations published in the document [WHO Infection prevention and control in the context of COVID-19: a guideline, 21 December 2023](#) (4, 5) and other technical documents (e.g. [Global strategy on infection prevention and control](#) (6), [Strategic Preparedness and Response plan for 2023-2025](#) (1) and [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (3). It also emphasizes the need for sustained financing and a trained, protected and respected workforce to maintain these life-saving actions in the context of competing health and non-health emergencies. It additionally recognizes the need to strengthen the acute and longer-term response for COVID-19 in relation to other pressing public health issues.

Essential actions for Member States to consider in adjusting COVID-19 policies

The COVID-19 pandemic revealed significant weaknesses in health care systems, particularly in fragile, conflict-affected and vulnerable settings and among at-risk populations. It underscored the urgent need to enhance infection prevention and control (IPC) programmes and outbreak response capacities, alongside broader reforms for safe and quality care. The WHO Director-General's standing recommendations advise countries to ensure that infection prevention and control measures are in place for suspected and confirmed COVID-19 cases in clinical settings and that health care providers receive training accordingly and access to personal protective equipment. They further recommend implementing measures to protect health workers and care givers as appropriate (1).

While many countries made notable IPC improvements during the pandemic, these were often confined to emergency responses. WHO continues to recommend that all possible efforts to reduce SARS-CoV-2 transmission within health care facilities should continue and be strengthened.

It remains important to focus on the following three key objectives for COVID-19 management and control: elevate the importance of IPC programmes; maintain outbreak readiness and response capacities; and establish and maintain appropriate infrastructure needed for safe health service delivery and a resilient health workforce.

1. Elevate the importance of IPC programmes

At the 77th World Health Assembly in May 2024, a [Global action plan and monitoring framework for infection prevention and control \(IPC\) for 2024–2030](#) was approved to support the implementation of the [Global strategy on infection prevention and control](#) (6). The plan outlines eight strategic directions: political commitment, active IPC programs, integration and coordination, IPC training, data utilization, advocacy, research and stakeholder collaboration (6). The new action plan outlines specific actions, indicators and targets for Member States (as well as other international and national stakeholders and partners) to enhance IPC practices, addressing critical gaps that have historically exacerbated outbreaks in health care settings. Progress will be tracked against targets, including some that should be prioritized whenever possible. These include dedicated IPC and water, sanitation and hygiene (WASH) funds; IPC legislation; and robust surveillance systems for health care-associated infections and antimicrobial resistance (AMR) (6).

For policy makers, the emphasis must be on securing robust political commitment and leadership to implement and sustain effective IPC programs. This involves establishing and enforcing comprehensive legal frameworks, regulations and accreditation systems to ensure that IPC practices are integrated at all levels (5). Mobilizing resources and ensuring sustained financing are crucial to address local needs and support long-term IPC initiatives. By prioritizing these actions, policy makers can drive substantial improvements in infection prevention, protect public health and enhance the resilience of health systems (6).

2. Maintain outbreak readiness and response capacities

Health care facilities can amplify infectious disease outbreaks, including COVID-19, making it paramount to maintain IPC operational readiness (4, 5). Further surges of COVID-19, especially those due to new SARS-CoV-2 variants, could overwhelm health systems.

In the event of a surge, countries should be prepared to convene or reconvene a national task force, including IPC experts, to rapidly review the latest epidemiological and scientific evidence to revise IPC policies and national guidelines, if necessary (7). To maintain readiness, a system for dissemination of this information to support implementation of IPC activities across the health system should be in place. It is crucial to regularly review contingency plans, including human and financial resources, and assess the procurement of supplies needed to effectively implement IPC measures and WASH services in health facilities and community settings (7). Regular testing of the system through simulation or tabletop exercises can help ensure readiness for COVID-19 surges and identify any gaps (6).

Surveillance of health care-associated infections within health facilities is essential for the rapid identification of COVID-19 outbreaks, including among health and care workers, and requires ongoing investment. These outbreaks can amplify transmission both within health care facilities and in communities.

3. Maintain appropriate infrastructure and a resilient workforce

Member States should regularly assess IPC programmes and WASH services in health care facilities using standardized tools. Action plans should be developed, and adequate funding provided to address identified gaps. WHO offers tools to support these efforts ([WASH FIT](#) (8), [IPCAT](#) (9), [IPCAT-MR](#) (10), [SPAR](#) (11)). Investments in health facility infrastructure, such as ventilation systems and waste management, are critical for supporting preparedness, readiness and response activities.

IPC training to prepare for surges of COVID-19 and other emerging high-threat diseases, along with implementing policies to protect health workers (including vaccination, in accordance with national policy), is essential for strengthening capacities and maintaining a resilient health workforce (see [Guide for](#)

[the development and implementation of occupational health and safety programmes for health workers](#)) (12). It is also critical to maintain procurement and supply chain systems for essential items such as hand sanitizer and personal protective equipment that can be scaled up in the event of a COVID-19 upsurge (7).

Finally, policy makers should empower health-facility leadership to enhance IPC and WASH capacities. This includes ensuring the safe flow of patients and staff, implementing COVID-19 screening, ensuring the availability of personal protective equipment and improving the health-care environment to support these measures effectively (6).

Conclusions

As COVID-19 is integrated into broader infectious disease IPC programmes, there is a pressing need to build resilient health systems that address existing gaps in IPC implementation. WHO urges countries to maintain IPC operational readiness to prevent future COVID-19 outbreaks and manage those that arise, while ensuring the sustainability of IPC programmes in the long term to reduce the endemic burden of health care-associated infections and antimicrobial resistance (13).

Plans for updating

WHO will continue to monitor the situation closely for any changes that may affect this policy brief. WHO will issue necessary updates as evidence becomes available and is reviewed.

References

1. Standing recommendations for COVID-19 issue by the Director-General of the World Health Organization (WHO) in accordance with the International Health Regulations (2005) (IHR). Geneva: World Health Organization; 2023. Retrieved from https://cdn.who.int/media/docs/default-source/documents/ihr/covid-19_standing-recommendations_9-august-2023.pdf?sfvrsn=805ad4e4_8&download=true.
2. From emergency response to long-term COVID-19 disease management: sustaining gains made during the COVID-19 pandemic. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/367420>.
3. From emergency response to long-term COVID-19 disease management: ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: guidance on calibrating the response. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/372712>.
4. Infection prevention and control in the context of COVID-19: a guideline, 21 December 2023. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/375200>.
5. Dunn, K., Hurwitz, H.H., Toledo, J.P., Schwaber, M.J., Chu, M., Chou, R., Ford, N., Allegranzi, B. and Baller, A., 2024. Summary of WHO infection prevention and control guideline for covid-19: striving for evidence based practice in infection prevention and control. *bmj*, 385.
6. Global strategy on infection prevention and control. World Health Organization. Geneva: World Health Organization; 2023. Retrieved from <https://iris.who.int/handle/10665/376751>.
7. World Health Organization. Framework and toolkit for infection prevention and control in outbreak preparedness, readiness and response at the national level. Geneva: World Health Organization; 2021. Retrieved from <https://iris.who.int/handle/10665/345251>.
8. (Water and sanitation for health facility improvement tool (WASH FIT): a practical guide for improving quality of care through water, sanitation and hygiene in health care facilities, 2nd

- ed. World Health Organization. World Health Organization & United Nations Children's Fund (UNICEF); 2022. Retrieved from <https://iris.who.int/handle/10665/353411>.
9. Instructions for the national infection prevention and control assessment tool 2 (IPCAT2). Geneva: World Health Organization; 2017. Retrieved from <https://iris.who.int/handle/10665/330078>.
 10. Assessment tool of the minimum requirements for infection prevention and control programmes at the national level. Geneva: World Health Organization; 2021. Retrieved from <https://www.who.int/publications/m/item/assessment-tool-of-the-minimum-requirements-for-infection-prevention-and-control-programmes-at-the-national-level>.
 11. e-SPAR. Geneva: World Health Organization [Website] Retrieved from <https://extranet.who.int/e-spar/>.
 12. Caring for those who care: guide for the development and implementation of occupational health and safety programmes for health workers. World Health Organization & International Labour Organization; 2022. Retrieved from <https://iris.who.int/handle/10665/351436>.
 13. Building health systems resilience for universal health coverage and health security during the COVID-19 pandemic and beyond: WHO position paper. Geneva: World Health Organization; 2021. Retrieved from <https://iris.who.int/handle/10665/346515>.

COVID-19 vaccination

December 2024

Key points

- As per the WHO Director General's standing recommendations, Member States are recommended to continue to offer COVID-19 vaccination based on both the recommendations of the WHO Strategic Advisory Group of Experts on Immunization (SAGE) and on national prioritization informed by cost benefit reviews.
- WHO SAGE recommends a simplified single-dose regimen for immunization for most COVID-19 vaccines in high and medium priority-use groups. This simplified dosing regimen aims to improve acceptance and uptake, while providing adequate protection at a time when most people have had at least one prior SARS-CoV-2 infection.
- Countries are encouraged to explore the periodic re-vaccination of most high priority-use groups and certain sub-populations with special considerations, at an interval of 6–12 months, depending on the group.
- Countries should procure and use monovalent JN.1 lineage-adapted vaccines as they are likely to provide modestly enhanced protection against currently circulating variants. However, vaccination should not be delayed in anticipation of updated variant-containing vaccines as all currently approved COVID-19 vaccines continue to provide protection against severe disease and death.
- Countries are encouraged to use evidence-based and behaviourally informed strategies to increase confidence in and uptake of COVID-19 vaccination, particularly in high priority-use groups. This may include exploring co-administration of COVID-19 and seasonal influenza vaccines.
- WHO recommends integrating COVID-19 vaccination into primary health care and other routine health services.
- Countries and donors should continue to invest in research and development of vaccine products with improved attributes.

Introduction

Nearly five years since the first SARS-CoV-2 infections were reported, the global COVID-19 situation has changed substantially. With widespread immunity from both vaccination and prior infection, currently circulating variants are now associated with lower severe disease rates and fewer hospitalizations. As a result, most countries have lifted public health and social measures and have moved to end their national COVID-19 emergencies. In this context, many around the world wish to move on and forget their experiences with the COVID-19 pandemic.

COVID-19 continues to circulate widely, however, presenting significant challenges to health systems worldwide. Tens of thousands of people are infected or re-infected with SARS-CoV-2 each week. From mid-

September to mid-October 2024, WHO received reports of more than 296 000 confirmed cases of COVID-19 (see the [WHO COVID-19 Dashboard](#)). This figure is certainly an underestimate, as there has been a persistent decline in COVID-19 surveillance and reporting, and wastewater surveillance indicates that circulation is 2–20 times higher than the case numbers that are reported.

It is vital that countries sustain the public health response to COVID-19 amid ongoing illness and death and the emergence of SARS-CoV-2 variants, adapting it to the requirements based on the current COVID-19 situation and risk. Countries are increasingly balancing COVID-19 prevention and response activities with other social and economic priorities.

On 9 August 2023, the WHO Director-General published [standing recommendations to support ongoing efforts for the prevention and control of COVID-19](#) in accordance with provisions of Articles 16 to 18, and 50 to 53 of the International Health Regulations (2005) (IHR) (1). These standing recommendations are in effect for all States Parties (WHO Member States plus Liechtenstein and the Holy See) until 30 April 2025.

The updated WHO [Strategic Preparedness and Response plan for 2023-2025](#) is designed to help countries end the emergency phase of the pandemic and shift to comprehensive, long-term management of COVID-19 within broader disease prevention and control programmes. As countries continue to strengthen COVID-19 programmes within their public health systems, two objectives remain critical: 1) reducing the risk of emergence of and controlling the circulation of SARS-CoV-2 variants with increased growth rates and immune escape, with a particular focus on reducing infection in high-risk and vulnerable populations; and 2) diagnosing and treating COVID-19 to reduce mortality, acute severe disease morbidity and long-term sequelae.

Purpose of this document

In 2022 and 2023, WHO released a package of policy briefs designed to help countries formulate policies to manage SARS-CoV-2 transmission, particularly in high-risk and vulnerable populations, and to reduce morbidity, mortality and long-term sequelae from COVID-19.

The policy briefs have been updated to reflect current COVID-19 situation and risk and the approaches outlined in the September 2023 WHO document [Ending the COVID-19 emergency and transitioning from emergency phase to longer-term disease management: Guidance on calibrating the response](#) (2) and the [Director-General's standing recommendations for COVID-19](#) (1).

This policy brief is intended for national and sub-national policy and decision makers in ministries of health other governments agencies and partners engaged in and responsible for the health of the populations they serve. It provides a concise overview of the key recommended actions for Member States to take based on WHO COVID-19 technical guidance and strategies.

Essential actions for Member States to consider in updating COVID-19 vaccination policies and programmatic approaches

Countries should continue to offer COVID-19 vaccination based on the recommendations of the WHO Strategic Advisory Group of Experts on Immunization (SAGE) and on national prioritization informed by cost benefit reviews; and vaccine delivery should be appropriately integrated into health services (1). Countries are encouraged to improve efforts to increase COVID-19 vaccination coverage for all people in high-priority groups using COVID-19 vaccines recommended by WHO or vaccines approved by national regulatory authorities, taking into account SAGE recommendations, and continue surveillance of vaccination uptake and adverse events (1). It is further recommended that countries actively address

vaccine misinformation, disinformation, acceptance and demand issues with communities and health and care providers (1).

1. Revise target groups and schedules based on latest available data and global/regional recommendations

In November 2023, the WHO Strategic Advisory Group of Experts on Immunization (SAGE) updated its [Roadmap for prioritizing uses of COVID-19 vaccines](#), drawing on the latest global epidemiological, vaccine effectiveness and public health impact data (3).

Under the updated roadmap, WHO recommends a simplified single-dose regimen for immunization for most COVID-19 vaccines¹ in high- and medium priority-use groups. This simplified dosing regimen aims to improve acceptance and uptake, while providing adequate protection at a time when most people have had at least one prior SARS-CoV-2 infection. High priority-use groups include older adults² and other adults living with severe obesity or comorbidities that increase their risk of severe COVID-19³. Medium priority-use groups include healthy adults⁴ and children and adolescents living with severe obesity or comorbidities that increase their risk of severe COVID-19⁵. The roadmap outlines distinct vaccination recommendations for several sub-populations with special considerations, notably persons with immunocompromising conditions⁶, pregnant adults and adolescents and health and care workers with direct patient contact. Primary vaccination with one to three doses is recommended depending on the group, based on their risk of severe COVID-19. Vaccination in low priority-use groups, including healthy children and adolescents, can be considered based on country priorities and available resources.

The updated roadmap further recommends the periodic re-vaccination of most high priority-use groups and sub-populations with special considerations at an interval of 6-12 months, depending on the group. Re-vaccination is not routinely recommended for medium and low priority-use groups.

2. Use available vaccine stocks while pursuing access to latest variant-adapted vaccine products

While currently approved COVID-19 vaccines (including monovalent index virus only vaccines, bivalent BA.4/.5 vaccines and monovalent XBB vaccines) continue to provide protection against severe disease and death, the WHO Technical Advisory Group on COVID-19 Vaccine Composition (TAG-CO-VAC) [advised using a monovalent JN.1 lineage as the antigen in future](#) vaccine formulations during its April 2024 meeting (4).

Several COVID-19 vaccine manufacturers are developing or have developed monovalent JN.1 lineage vaccines. These products should become available in late 2024 and 2025. Based on immunogenicity and modelling studies, monovalent JN.1 lineage-containing vaccines are likely to have modestly enhanced vaccine effectiveness compared to monovalent XBB-containing vaccines, bivalent BA.4/.5-containing vaccines and monovalent index virus-only vaccines at a time when JN.1 lineages predominate SARS-CoV-2 circulation. Hence, these vaccines should be used when they become available.

Nevertheless, approved COVID-19 vaccines continue to provide protection against severe disease and death. Hence, any of the WHO emergency use-listed or prequalified COVID-19 vaccines can still be used

¹ Inactivated COVID-19 vaccines still require two doses as initial doses, however.

² Minimum age of 'older adults' to be decided by countries; often it is 50 or 60 years and older.

³ Comorbidities that can put an individual at higher risk of severe COVID-19 can include diabetes, chronic lung disease, and heart, liver, and kidney diseases, among others.

⁴ Age range of 'adults' to be decided by countries; often it is 18–49 or 18–59 years.

⁵ Age range of 'children and adolescents' to be decided by countries; often it is 5–17 years.

⁶ Immunocompromised individuals can include those with active cancer, transplant recipients, those immunodeficient and being actively treated with immunosuppressives, and those living with HIV with a current CD4 cell count of <200 cells/ul, with evidence of opportunistic infection, and not on HIV treatment, and/or with a detectable viral load, among others.

either for primary vaccination or for periodic revaccination if the monovalent JN.1-containing vaccines are unavailable. Vaccination should not be delayed in anticipation of access to variant-containing vaccines as there is a greater benefit in ensuring that persons at high risk of developing severe COVID-19 receive a dose of any available vaccine as compared to delaying vaccination.

3. Accelerate COVID-19 vaccine uptake in high priority-use groups, including periodic revaccination

[The WHO Director-General's standing recommendations for COVID-19](#) emphasize the need to actively address vaccine misinformation, disinformation, acceptance and demand issues with communities and health and care providers (1). [WHO recommends that countries use evidence-based and behaviourally informed strategies to increase confidence in and uptake of COVID-19 vaccination](#), particularly in high priority-use groups (5). This includes the gathering and use of local data on behavioural and social drivers of vaccination to assess root causes of low uptake and to design and evaluate interventions tailored toward high priority-use groups. Interventions to increase trust and uptake can include targeted information campaigns via trusted information sources, partnering with local and community actors to increase community engagement training health and care workers to increase their confidence in recommending COVID-19 vaccination and improvements to delivery strategies to increase the ease of access to vaccination.

Co-administration of COVID-19 vaccines with other vaccines, notably those for seasonal influenza, may increase vaccine uptake by reducing the number of vaccination contacts needed by one person. Further, co-administering vaccines may offer efficiencies in the programmatic delivery of both vaccines, reducing both administrative and programmatic costs. [WHO encourages countries to explore opportunities to co-administer COVID-19 and seasonal influenza vaccines](#) to increase uptake of both vaccines (6).

In addition to the social and behavioral data mentioned above, WHO continues to recommend and request that countries collect, analyse and report COVID-19 vaccine programme implementation data, including data on vaccine uptake in high priority-use groups, vaccination policies, products in use, product procurement and pricing and vaccine safety (7). These data should be used to inform policy and programme decision-making at all levels of the health system.

4. Integrate COVID-19 vaccination with routine health services

Given the latest policy recommendations and current COVID-19 vaccine programme goals, [WHO recommends that countries integrate COVID-19 vaccination into primary health care and other routine health services](#) (8), moving away from mass, campaign-style vaccination. This recommendation reflects shifting vaccination goals, as the focus moves towards reaching high priority-use groups and away from reaching the entire population. From a sustainability perspective, vaccination through routine health services requires fewer human and financial resources as compared to the mass vaccination efforts that characterized the early rollout.

Routinization of COVID-19 vaccination represents an opportunity for health systems to sustain the advances made in vaccination programs during the pandemic while enhancing preparedness, prevention and response capacities against future threats. It promotes the life course approach to vaccination and encourages the development of vaccine delivery platforms for at-risk groups, notably older adults and health and care workers. These delivery platforms can also facilitate the introduction of new adult-targeted vaccines and the 'catchup' of missed doses for other vaccines. WHO recommends that countries assess the new capacities developed and investments made during COVID-19, identifying those that can be sustained and carried forward in service of broader disease control programmes and health system

strength. Examples might include new or reinforced immunization information systems, enhanced cold chain infrastructure and training programmes for health and care workers.

5. Continue to invest in research & development of new vaccine products

Policy makers and donors should consider increasing financial and technical investments in innovations aimed at developing more durable, broadly protective COVID-19 vaccines, including those designed to reduce SARS-CoV-2 transmission and those with attributes for improved delivery. New vaccine products able to substantially reduce SARS-CoV-2 transmission will be critical to reducing the risk of the emergence of new variants and to diminishing the likelihood of resultant new waves of disease. WHO provides guidance for vaccine development [through target product profiles](#) and vaccine composition recommendations (4, 9).

Conclusions

To date, nearly 14 billion doses of COVID-19 vaccines have been administered worldwide. While important disparities persist, nearly all countries have reached high levels of primary COVID-19 immunization coverage. This high level of coverage, combined with the fact that most people have had at least one SARS-CoV-2 infection, has contributed to increased global population immunity.

SARS-CoV-2 continues to evolve, however, and new variants continue to fuel ongoing transmission, resulting in new cases of severe disease and death, especially in high priority-use groups. It is important that countries continue to target high priority-use groups for vaccination. This will require adaptive and resilient approaches to ensure that vaccination programmes remain sustainable, mainly by integrating COVID-19 vaccination into routine health services. It is critical that Member States routinely review and update COVID-19 vaccination policies and programme goals to align with the current epidemiological situation and broader objectives for COVID-19 prevention and control.

Plans for updating

WHO will continue to monitor the situation closely for any changes that may affect this policy brief. WHO will issue necessary updates as evidence becomes available and is reviewed.

References

1. Standing recommendations for COVID-19 issued by the Director-General of the World Health Organization (WHO) in accordance with the International Health Regulations (2005) (IHR). Geneva: World Health Organization; 2023. Retrieved 12 November 2024, from [https://www.who.int/publications/m/item/standing-recommendations-for-covid-19-issued-by-the-director-general-of-the-world-health-organization-\(who\)-in-accordance-with-the-international-health-regulations-\(2005\)-\(ihr\)](https://www.who.int/publications/m/item/standing-recommendations-for-covid-19-issued-by-the-director-general-of-the-world-health-organization-(who)-in-accordance-with-the-international-health-regulations-(2005)-(ihr))
2. Strategic Preparedness and Response Plan: April 2023-April 2025 – From Emergency Response to Long-term COVID-19 Disease Management: Sustaining Gains Made During the COVID-19 Pandemic. Geneva: World Health Organization; 2023. Retrieved 12 November 2024, from <https://www.who.int/publications/i/item/WHO-WHE-SPP-2023.1>
3. WHO SAGE Roadmap for prioritizing uses of COVID-19 vaccines. Geneva: World Health Organization; 2023. Retrieved 23 August 2024, from <https://www.who.int/publications/i/item/WHO-2019-nCoV-Vaccines-SAGE-Prioritization-2023.1>.
4. Statement on the antigen composition of COVID-19 vaccines. Geneva: World Health Organization; 2024. Retrieved 23 August 2024, from <https://www.who.int/news/item/26-04-2024-statement-on-the-antigen-composition-of-covid-19-vaccines>.
5. Increasing COVID-19 vaccination uptake. Geneva: World Health Organization; 2023. Retrieved 23 August 2024, from <https://www.who.int/publications/m/item/increasing-covid-19-vaccination-uptake>.
6. Coadministration of seasonal inactivated influenza and COVID-19 vaccines: Interim guidance. Geneva: World Health Organization; 2021. Retrieved 23 August 2024, from https://www.who.int/publications/i/item/WHO-2019-nCoV-vaccines-SAGE_recommendation-coadministration-influenza-vaccines.
7. Updates to COVID-19 vaccination data reporting requirements. Geneva: World Health Organization, 2023. Retrieved 08 November 2024, from <https://www.technet-21.org/en/resources/guidance/updates-to-covid-19-vaccination-data-reporting-requirements>
8. Considerations for integrating COVID-19 vaccination into immunization programmes and primary health care for 2022 and beyond. Geneva: World Health Organization, 2023. Retrieved 23 August 2024, from <https://www.who.int/publications/i/item/9789240064454>.
9. WHO Target Product Profiles for COVID-19 Vaccines. Revised version April 2022. Geneva: World Health Organization; 2022. Retrieved 23 August 2024, from <https://www.who.int/publications/m/item/who-target-product-profiles-for-covid-19-vaccines>.