WHO POLICY BRIEF

World Health Organization

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 vaccines[1] 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 adults[2] and other adults living with severe obesity or comorbidities that increase their risk of severe COVID-19[3]. Medium priority-use groups include healthy adults[4] and children and adolescents living with severe obesity or comorbidities that increase their risk of severe COVID-19[5]. The roadmap outlines distinct vaccination recommendations for several sub-populations with special considerations, notably persons with immunocompromising conditions[6], 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 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 additional 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.

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