Western Pacific Regional Road Map for COVID-19 Vaccination Response 2022–2023
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## ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AEFI</td>
<td>adverse event following immunization</td>
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<tr>
<td>AESI</td>
<td>adverse event of special interest</td>
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<tr>
<td>CFR</td>
<td>case fatality rate</td>
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<td>COVAX</td>
<td>COVID-19 Vaccines Global Access</td>
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<tr>
<td>COVID-19</td>
<td>coronavirus disease</td>
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<tr>
<td>HCW</td>
<td>health-care worker</td>
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<td>NDVP</td>
<td>National Deployment and Vaccination Plan</td>
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<td>NRA</td>
<td>national regulatory authority</td>
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<td>RSF</td>
<td>Regional Strategic Framework for Vaccine-Preventable Diseases and Immunization in the Western Pacific 2021–2030</td>
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<tr>
<td>SAGE</td>
<td>Strategic Advisory Group of Experts on Immunization</td>
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<td>SIA</td>
<td>supplemental immunization activity</td>
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<td>TAG</td>
<td>Technical Advisory Group</td>
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<td>VPD</td>
<td>vaccine-preventable disease</td>
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<td>WHO</td>
<td>World Health Organization</td>
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1. BACKGROUND

1.1 Western Pacific Regional Road Map for COVID-19 Vaccination Response 2021–2022

The development of the Western Pacific Regional Road Map for COVID-19 Vaccination Response 2021–2022 was endorsed at the 30th Meeting of the Technical Advisory Group on Immunization and Vaccine-Preventable Diseases in the Western Pacific Region on 21–24 June 2021. The Road Map 2021–2022 was developed through the incorporation of the WHO SAGE Roadmap for Prioritizing Uses of COVID-19 Vaccines and the defined targets and goals outlined in the Strategy to Achieve Global COVID-19 Vaccination by mid-2022.3

The Road Map 2021–2022 has the following regional objectives and targets:

**Regional objective 1**

Sustainable reduction of:

- mortality and morbidity due to the coronavirus disease (COVID-19) among health-care workers (HCWs) and older adults;
- mortality and morbidity due to COVID-19 among other high-risk populations;
- burden on health-care systems due to COVID-19;
- number of severe cases and deaths due to COVID-19; and
- number of symptomatic COVID-19 cases.

**Regional objective 2**

Implementation of the Regional Strategic Framework for Vaccine-Preventable Diseases and Immunization in the Western Pacific 2021–2030 (RSF) strategies through COVID-19 vaccination response:

- Establish platforms for immunization services along the life course (RSF Strategy 1.2).
- Promote preparation and implementation of tailor-made immunization strategies (RSF Strategy 1.3).
- Strengthen COVID-19 vaccine security (RSF Strategy 1.4).
- Strengthen vaccine safety and safe immunization (RSF Strategy 1.6).
- Ensure preparedness for and timely/rapid response to safety events related to vaccines or immunization programmes (RSF Strategy 3.2).

- Promote vaccine confidence, acceptance and demand (RSF Strategy 1.2).
- Generate quality data for ensuring continuous improvement of immunization programmes and strengthening the overall health system (RSF Strategy 2.3).
- Promote evidence-based decision-making and action (RSF Strategy 2.4).

**Regional targets by the end of 2021:**

1. Achieve vaccination coverage of at least 90% with all recommended doses for HCWs and older adults.
2. Expand and accelerate vaccination for other high-risk populations (individuals with comorbidities, high-risk sociodemographic groups, essential workers outside the health sector, high-risk employment groups, etc.).
3. Start additional dose(s) of vaccine to protect immunocompromised people and older people.
4. Achieve vaccination coverage with at least one dose for the entire population:
   - >40% in non-Pacific island countries and areas
   - >90% in Pacific island countries and areas.

**Regional targets in 2022:**

1. Achieve vaccination coverage of at least 80% with all recommended doses for the entire population by the first half of 2022.
3. Revise vaccination strategies (including introduction of booster dose/s) and adaptation of heterologous schedule to address evolving epidemiology [such as emergence of new variant/s] and sustain the progress achieved in regional objective 1.

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1.2 COVID-19 cases and deaths in the Western Pacific Region

By the end of September 2022, cumulative confirmed cases and deaths were at least 89.75 million and 270,750, respectively. Of the 37 countries and areas in the Region, only Tokelau remains COVID-19-free, while Niue, Pitcairn Islands, Tokelau and Tuvalu have zero COVID-19 deaths.5

1.3 Purpose of this document

As COVID-19 continues to be a global threat to health and society, WHO and the Technical Advisory Group (TAG) on Immunization and Vaccine-Preventable Diseases in the Western Pacific Region recommended updating the Western Pacific Regional Road Map for COVID-19 Vaccination Response 2021–2022 during the 31st TAG meeting in June 2022. The updated Road Map will provide future directions to countries and areas considering the achievements, challenges and opportunities the COVID-19 vaccination response has provided and laid out.

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2.1 Progress of the COVID-19 vaccination response

Progress and achievements made by the end of September 2022 are summarized for each regional objective as follows:

For regional objective 1

1. Achieved vaccination coverage of at least 90% with all recommended doses:
   - for HCWs in 31 countries and areas (except Kiribati, Papua New Guinea, Samoa, Solomon Islands, Tuvalu, and Wallis and Futuna); and
   - for older adults in 22 countries and areas (except China, Hong Kong SAR (China), the Lao People’s Democratic Republic, Macao SAR (China), New Caledonia, Palau, Papua New Guinea, the Philippines, Pitcairn Islands, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu, and Wallis and Futuna).

2. Achieved vaccination coverage of at least 80% with all recommended doses:
   - for the entire population in 18 countries and areas (except Fiji, French Polynesia, Kiribati, the Lao People’s Democratic Republic, Malaysia, the Marshall Islands, the Federated States of Micronesia, Mongolia, Nauru, New Caledonia, New Zealand, the Commonwealth of the Northern Mariana Islands, Papua New Guinea, Pitcairn Islands, the Philippines, Tonga, Vanuatu, and Wallis and Futuna).

3. Introduced:
   - first booster dose in all 37 countries and areas
   - heterologous schedule in 30 countries and areas
   - vaccination of adolescents in 35 countries and areas
   - vaccination of children in 31 countries and areas.

For regional objective 2

1. Established vaccination platforms and/or policies to deliver COVID-19 vaccines throughout the life course, targeting adolescents, adults and older persons.
2. Implemented tailor-made strategies to target priority groups, such as vaccination for HCWs, to prevent the nosocomial spread of outbreaks.
3. Fast-tracked the process for emergency use authorization to ensure vaccine availability in a public health emergency.
4. Enhanced the vaccine safety surveillance system to report, monitor and respond to adverse events following COVID-19 vaccination, at least at the national level, in most countries in the WHO Western Pacific Region.
5. Improved health systems, e.g. laboratory capacity for COVID-19 surveillance and health information systems for COVID-19 vaccination including registration of vaccine recipients and tracking of vaccination status.
6. Generated high-quality and timely data to support evidence-based decision-making through the development of electronic surveillance systems (e.g. dashboards) to track COVID-19 vaccination coverage as well as infection.
7. Improved supply chain management including cold chain capacity in some countries.
8. Developed and implemented various communication strategies or tools (e.g. posters, radio, social media, etc.) to educate about and advocate for COVID-19 vaccination.

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6 No information is available from Pitcairn Islands.
2.2 Impact of the COVID-19 vaccination response

Positive impact

1. Lower case fatality rates (CFRs) among the entire population and older adults in countries with high vaccination coverage (i.e. ≥70% of the entire population received all recommended doses) were observed, as shown in Fig. 1 and Fig. 2. However, CFR can be affected not only by vaccination coverage but also by other factors such as health-care system capacity, health-care-seeking behaviour, clinical severity [e.g. Delta] and transmissibility [e.g. Omicron] of circulating variants.

![COVID-19 vaccination coverage, cases, deaths and CFRs among the entire population, Japan and Viet Nam, January 2020 – May 2022](image1)

![COVID-19 vaccination coverage, cases, deaths and CFRs among the entire population and older adults, Australia and Malaysia, January 2020 – May 2022](image2)

2. The massive and rapid deployment of COVID-19 vaccines in the Western Pacific Region averted an estimated 30.14 deaths per 10,000 people or 22.58 deaths per 10,000 vaccinations (first or second dose) from 8 December 2020 to 8 December 2021, according to a study by Watson et al. This may have contributed to countries’ policy decisions to open their international borders and resume economic and socio-cultural activities.

![COVID-19 vaccination coverage, cases, deaths and CFRs among the entire population and older adults, Australia and Malaysia, January 2020 – May 2022](image3)

![COVID-19 vaccination coverage, cases, deaths and CFRs among the entire population and older adults, Australia and Malaysia, January 2020 – May 2022](image4)

Negative impact

1. Disruptions (temporary suspensions or delays) of regular immunization campaigns and supplemental immunization activities (SIAs) were noted in some countries. Delays in the introduction of new and underutilized vaccines were also observed. These may be due to the pandemic-related burden on health systems (e.g. re-assignments of human resources to COVID-19 response, re-alignment of funds to COVID-19 response), travel and/or movement restrictions, and fear of getting COVID-19 infection.

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This results in a considerable decline in immunization coverage and an increase in population immunity gaps that, if prolonged, can potentially increase the risk of vaccine-preventable disease (VPD) outbreaks.

2. Epidemiological and laboratory surveillance of VPDs has been affected by COVID-19 in many countries, making it difficult to monitor and evaluate the true impact of the pandemic on routine immunization and provide a timely response to mitigate the effects.

2.3 Challenges of the COVID-19 vaccination response

1. Continued COVID-19 transmission, evolution of new variants and relatively rapid immunity waning, which required booster doses.
2. Declining trust and demand for vaccines, which was triggered by frequent updates on product information as well as desensitization to COVID-19 risk, doubt in vaccine effectiveness and misinformation on the purpose of vaccination.
3. Widespread misinformation and disinformation about vaccine safety (e.g. development of new noncommunicable diseases falsely attributed to vaccination) and concern about very rare but serious adverse events of special interest (AESIs) related to COVID-19 vaccination that affect vaccine demand and acceptance for all vaccines.
4. Currently insufficient evidence to support any preferential recommendation for bivalent vaccine-containing boosters over ancestral viral-only boosters, but equitable access to such vaccines remains challenging.
5. Scarcity of evidence for coadministration of COVID-19 vaccines with other routine immunization antigens during routine immunization and SIAs among children.

2.4 Opportunities of the COVID-19 vaccination response

1. Investments and achievements from the COVID-19 vaccination response (e.g. emergency vaccine authorization processes, health information system and surveillance, vaccine safety surveillance systems, supply and cold chain capacity, laboratory capacity) can be leveraged to strengthen overall immunization programmes.
2. Vaccination platforms and policies developed to deliver COVID-19 vaccines for priority groups can be used to expand immunization services throughout the life course, specifically targeting adolescents and adults.
3. REGIONAL OBJECTIVES AND STRATEGIES OF THE COVID-19 VACCINATION RESPONSE IN 2022–2023

Regional objective 1: Sustainable reduction of severe morbidity and mortality due to COVID-19

**Strategies:**

1.1 Ensure access and availability of COVID-19 vaccines including variant-containing vaccines and newly authorized vaccines among countries and areas in the Region.

1.2 Ensure all those in the highest and high priority-use groups are vaccinated with effective vaccine schedules (including booster doses), according to the latest WHO Prioritization Roadmap.

1.3 Sustain the highest possible vaccination coverage among medium priority-use groups and further extend to lowest priority-use groups with effective vaccine schedules (including booster doses), according to the latest WHO Prioritization Roadmap.

Regional objective 2: Integration of the COVID-19 vaccination response into the overall immunization system and programme and accelerated implementation of the Regional Strategic Framework for Vaccine-Preventable Diseases and immunization in the Western Pacific 2021–2030 (RSF)

**Strategies:**

2.1 Strengthen and expand newly established immunization services along the life course and promote the development and implementation of tailored immunization strategies by leveraging the COVID-19 vaccination experience [RSF Strategies 1.2 and 1.3].

2.2 Enhance the monitoring of and response to vaccine and immunization safety events at national and subnational levels by leveraging the COVID-19 vaccination experience [RSF Strategies 1.6 and 3.2].

2.3 Enhance vaccine confidence, demand and uptake for both COVID-19 vaccination and essential immunization services (i.e. for routine immunization and supplemental immunization activities [RSF Strategy 1.7].

2.4 Integrate COVID-19 reporting and investigation into the VPD surveillance system [RSF Strategies 2.1 and 2.3].

2.5 Utilize COVID-19 surveillance to evaluate vaccine effectiveness and impact of the COVID-19 vaccination response for evidence-based decision-making [RSF Strategy 2.4].
4. PRIORITY ACTIONS TO IMPLEMENT THE STRATEGIES

For regional objective 1

Strategy 1.1. Ensure access and availability of COVID-19 vaccines including variant-containing vaccines and newly authorized vaccines among countries and areas in the Region

Countries and areas
- Maintain or renew relevant regulations and legal frameworks to ensure that vaccines can be brought into countries without delay in public health emergencies.
- Regularly monitor the availability of vaccines for better procurement and distribution planning.
- Sustain political engagement and investments to mobilize resources for access to and delivery of vaccines.

WHO
- Continue to guide and assist countries in promptly securing regulatory authorization for new vaccines.
- Continue to liaise with the COVID-19 Vaccines Global Access Facility (COVAX) and other channels, as needed, to ensure adequate vaccine doses are timely received by countries and areas in the Region.

Strategy 1.2. Ensure all those in the highest and high priority-use groups are vaccinated with effective vaccine schedules (including booster doses), according to the latest WHO Prioritization Roadmap.

Countries and areas
- Actively search for, identify and vaccinate the unvaccinated (including those with incomplete vaccinations) among the highest priority-use groups (i.e. HCWs and older adults) through enhanced communication, social mobilization and other approaches.
- Update the National Deployment and Vaccination Plan (NDVP), as needed, including sub-national deployment plans, with country-specific objectives, goals, and targets to ensure rapid and equitable distribution and administration of vaccines following the latest WHO Prioritization Roadmap.
- Implement national and subnational COVID-19 vaccination campaigns, if feasible, including targeted campaigns as needed.
- Work to generate demand for vaccination within communities using a stepwise approach beginning from the highest and high priority-use groups.

WHO
- Enhance support to countries that have not yet achieved the Western Pacific regional goals for 2021–2022: 80% vaccination coverage for the entire population and 90% coverage for HCWs and older adults with all doses of the primary series.
- Continue to advocate equitable vaccination of priority target populations, particularly HCWs, older adults and immunocompromised persons.
- Continue to provide technical guidance and assistance in updating and implementing the NDVP and in monitoring and evaluating the COVID-19 vaccination programme.
- Continue to support countries in vaccine demand generation to prevent and respond to vaccine hesitancy and achieve the highest possible vaccination coverage among priority groups.

Strategy 1.3. Sustain the highest possible vaccination coverage among medium priority-use groups and further extend to the lowest priority-use groups with effective vaccine schedules (including booster doses), according to the latest WHO Prioritization Roadmap.

Countries and areas
- Actively search for, identify and vaccinate the unvaccinated (including those with incomplete vaccinations) among the highest priority-use groups (i.e. HCWs and older adults) through enhanced communication, social mobilization and other approaches.
- Update the National Deployment and Vaccination Plan (NDVP), as needed, including sub-national deployment plans, with country-specific objectives, goals, and targets to ensure rapid and equitable distribution and administration of vaccines following the latest WHO Prioritization Roadmap.
- Implement national and subnational COVID-19 vaccination campaigns, if feasible, including targeted campaigns as needed.
- Work to generate demand for vaccination within communities using a stepwise approach beginning from the highest and high priority-use groups.

For regional objective 2

Strategy 2.1. Strengthen and expand newly established immunization services along the life course and promote the development and implementation of tailored immunization strategies by leveraging the COVID-19 vaccination experience.

Countries and areas
- Accelerate the introduction of vaccines and booster doses and/or new vaccines (e.g. for human papillomavirus, pneumococcal diseases, seasonal influenza) through newly established delivery platforms targeting specific groups such as adolescents and adults.
- Apply the approaches and experiences learned from the COVID-19 vaccine response to raising awareness and generating demand for other VPD vaccines.
- Establish or expand integrated delivery points of contact between COVID-19 vaccination and immunization programmes as well
as other health programmes for various target age groups through collaboration beyond the health sector (e.g. in universities, nursing care homes, business settings and the travel industry).

- Determine the burden of VPDs beyond childhood, targeting specific groups by strategic use of integrated VPD surveillance and/or conduct of serosurvey for a defined population.

WHO

- Provide technical guidance in integrating and operationalizing COVID-19 vaccination into immunization programmes and primary health care.
- Support countries and areas in assessing readiness, developing plans, and identifying capacities and investments needed for integrating COVID-19 vaccination into other programmes.
- Review plans, provide guidance and mobilize resources in introducing new and underutilized vaccines targeting adolescents and older adults.

Strategy 2.2. Enhance the monitoring of and response to vaccine and immunization safety events at national and subnational levels by leveraging the COVID-19 vaccination experience.

Countries and areas

- Further strengthen the vaccine pharmacovigilance system to monitor and evaluate inherent properties and quality defects of vaccine products.
- Build or further enhance the capacity of national and/or subnational adverse event following immunization (AEFI) committees to investigate and respond to safety events.
- Continue to strengthen and maintain the technical capacity of all HCWs in detecting and reporting safety events through regular trainings on immunization safety and AEFI.
- Monitor, report and analyse vaccine safety data regularly, and use the analysed data to assess the risk-benefit assessment for policy decision-making.
- Continue to ensure immunization supplies (e.g. auto-disable syringes, AEFI kits) are always adequately available at the service delivery levels.
- Develop a programme or procedures to compensate individuals who experience a vaccine-related injury.

WHO

- Continue to provide technical support in conducting trainings on immunization safety and AEFI, as needed.
- Continue to support countries in analysing AEFI data and utilizing the analysed data in their decision-making process.
- Facilitate collaboration among countries in establishing a subregional regulatory body to perform national regulatory authority (NRA) activities, particularly for Pacific island countries and areas.

Strategy 2.3. Enhance vaccine confidence, demand and uptake for both COVID-19 vaccination and essential immunization services (i.e. for routine immunization and supplemental immunization activities).

Countries and areas

- Strengthen high-level coordination across the government (beyond the health sector), nongovernmental organizations and multilateral development partners to provide unified and robust support to enhance acceptance and sustain the uptake of COVID-19 vaccines.
- Sustain efforts to build public confidence through enhancing communication capacity of HCWs, establishing two-way communication and engagement between communities and HCWs using different media (TV, radio, social media) to provide a platform for rumour monitoring, sharing accurate information on the benefits, limitations and possible side-effects of immunization and immediately address concerns.
- Assess and address determinants of hesitancy and demand (e.g. low-risk perception) as well as barriers in getting vaccines (e.g. inaccessibility of vaccination sites, difficulty in registration, transport to vaccination sites) and plan interventions to drive specific groups to receive vaccines (e.g. conducting targeted campaigns, improving access).
- Plan and resume implementation of vaccination campaigns, including SIAs, particularly for high-risk groups (underserved populations) and high-risk areas (in schools, community outreach, mobile services).
- Adapt locally successful COVID-19 vaccination campaigns to routine immunization (e.g. vaccination in malls, business places and community spaces).
• Prepared detailed plan for routine immunization catch-up vaccinations for those who have missed their schedules, particularly for high-risk groups and underserved populations, through enhancing community uptake monitoring and tracking of defaulters.

WHO
• Review and update current vaccine introduction plans considering “new normal” settings in countries.
• Work in close collaboration with countries and key partners to monitor vaccine uptake and progress, identify bottlenecks and prioritize needed actions to resolve bottlenecks.
• Coordinate with countries and development partners to ensure vaccines (COVID-19 and essential routine immunization) and vaccine supplies are available.

Strategy 2.4. Integrate COVID-19 reporting and investigation into the VPD surveillance system.

Countries and areas
• Equip all public and private health facilities to be timely and accurately report all confirmed COVID-19 and VPD cases to national surveillance systems.
• Continue to establish comprehensive VPD surveillance, including COVID-19, considering the minimum WHO-recommended standards for surveillance of a set of priority VPDs and country priorities, diseases under the International Health Regulations (2005) and regional goals, as appropriate.
• Invest in robust data systems that allow the integration of COVID-19 reporting and investigation into VPD surveillance, including expansion of digital solutions, improved interoperability between electronic reporting systems and use of innovations that have proved useful during the COVID-19 pandemic and for COVID-19 vaccination (e.g. real-time dashboards).
• Consider adding COVID-19 vaccination history in health facility databases to inform vaccine effectiveness.

WHO
• Continue to provide support to countries in enhancing health information monitoring systems through in-country support and conduct of trainings.
• Continue to support priority countries and areas in restoring, revitalizing and strengthening VPD surveillance.


Countries and areas
• Conduct vaccine effectiveness studies in country-specific contexts, when feasible.
• Conduct COVID-19 post-introduction evaluation and/or intra-action reviews to evaluate the impact of the COVID-19 vaccination response.
• Monitor the emergence of COVID-19 variants to timely detect and respond to the potential resurgence of transmission.

WHO
• Continue to provide technical support in conducting COVID-19 post-introduction evaluation, intra-action reviews and vaccine effectiveness studies, whenever feasible.
• Continue to provide prompt and timely information on vaccine effectiveness, duration of protection of vaccines, emergence of variants, SAGE recommendations, and other WHO global information and guidance documents on vaccines and vaccination.