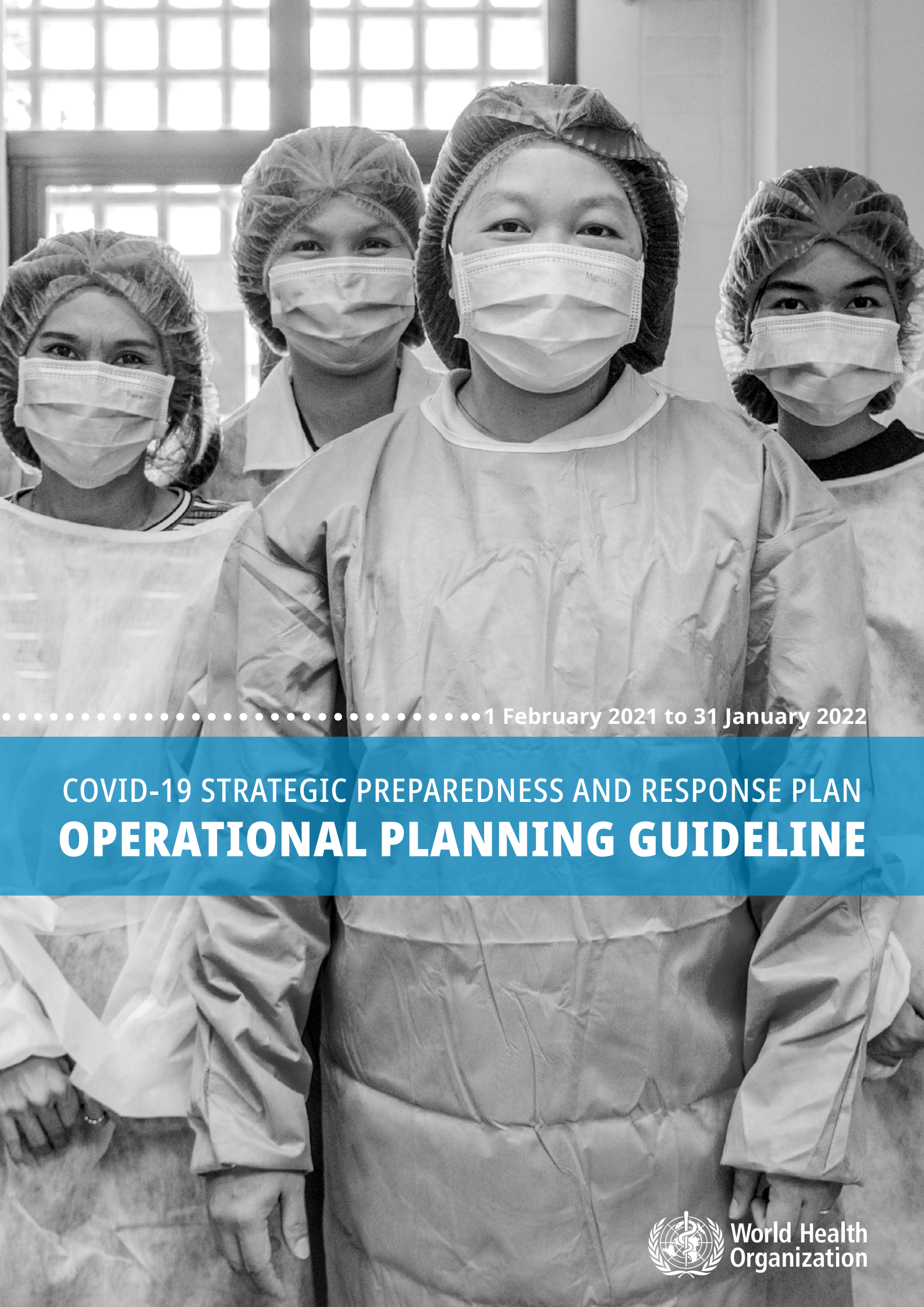
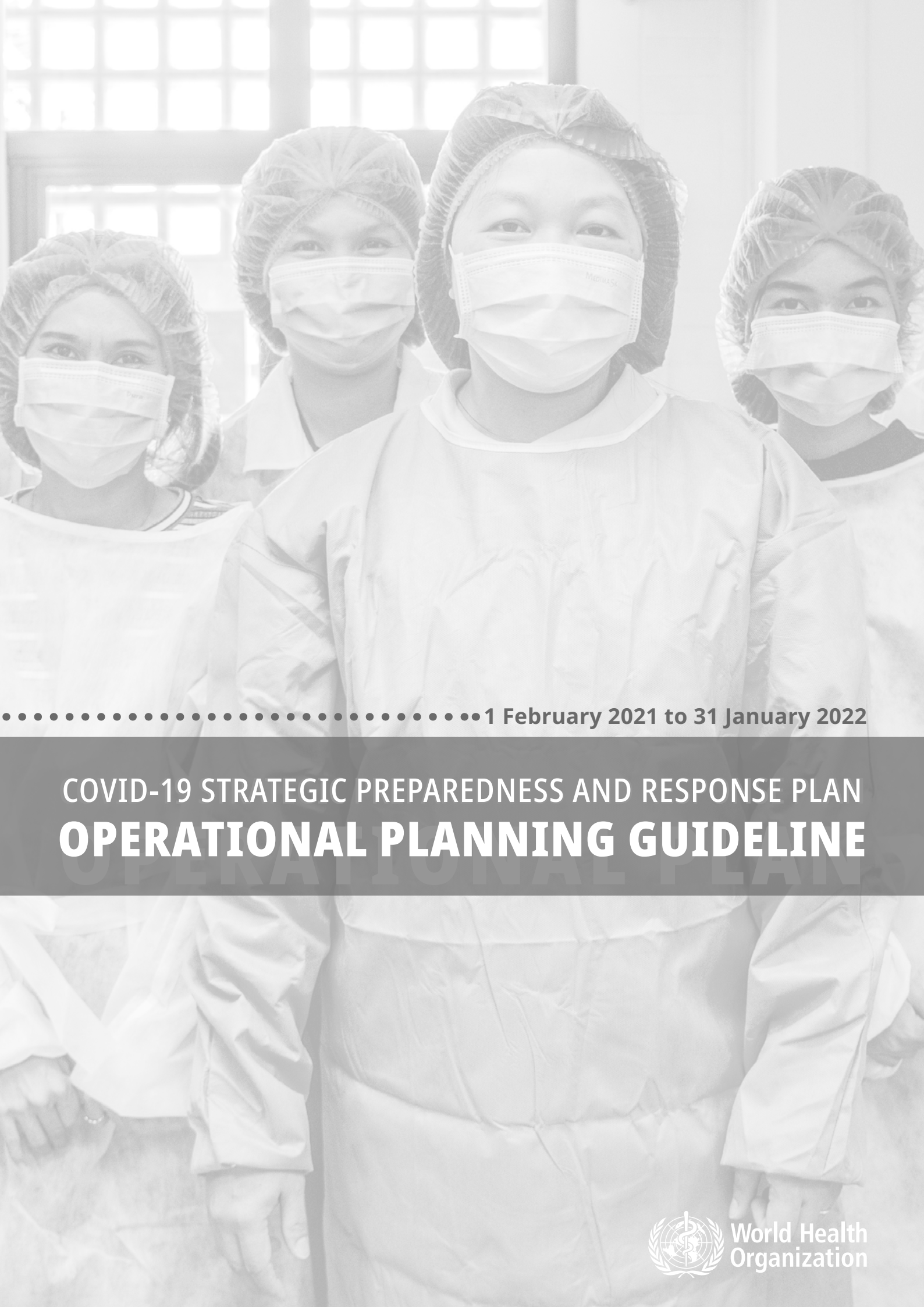


1 February 2021 to 31 January 2022

COVID-19 STRATEGIC PREPAREDNESS AND RESPONSE PLAN

OPERATIONAL PLANNING GUIDELINE

World Health Organization



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COVID-19 STRATEGIC PREPAREDNESS AND RESPONSE PLAN

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COVID-19 Strategic preparedness and response plan: Operational planning guideline

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INTRODUCTION

The WHO *COVID-19 Strategic preparedness and response plan* (SPRP) 2021 invites national authorities to update COVID-19 national plans to incorporate lessons learned throughout 2020, and to anticipate and prepare for the challenges of 2021, including the need to prepare all health systems to safely and equitably implement new COVID-19 tools such as vaccines. It is also intended for use by UN Country Teams and key partners to develop or update their 2021 COVID-19 multiagency plans with and in support of national authorities. The SPRP 2021 also describes the regional and global technical and operational platforms that will continue to support countries throughout 2021 to implement national action plans, to accelerate equitable access to new COVID-19 tools, and to undertake research and to innovate.

This *Operational planning guideline* was developed to accompany the SPRP 2021, to provide countries with practical, high-level actions under each of ten preparedness and response pillars that can be adapted as appropriate and implemented at national and subnational levels in order to achieve the SPRP 2021 six strategic objectives:

- suppress transmission;
- reduce exposure;
- counter misinformation and disinformation;
- protect the vulnerable;
- reduce death and illness;
- accelerate equitable access to new tools, including vaccines, diagnostics and therapeutics.

The *Operational planning guideline* includes action checklists with new recommended activities under ten response pillars, aligned with the most recent technical guidance (key reference documents are listed for each pillar; additional technical documents of interest are included in Annex 2), including in the areas of COVID-19 vaccine country readiness, and research and innovation. This document also describes the key areas for global and regional support to countries under each response pillar during 2021.

The WHO COVID-19 Partners Platform will also be updated to reflect these guidelines and should be utilized regularly by all stakeholders in the response. WHO wishes to encourage Member States to begin or continue using the Platform to share preparedness and response actions being planned and implemented; identify and update resource needs related to the response; and track relevant contributions committed in the context of this pandemic.

Pillars

Pillar 1: Coordination, planning, financing, and monitoring

Pillar 2: Risk communication, community engagement, and infodemic management

Pillar 3: Surveillance, epidemiological investigation, contact tracing, and adjustment of public health and social measures

Pillar 4: Points of entry, international travel and transport, mass gatherings and population movement

Pillar 5: Laboratories and diagnostics

Pillar 6: Infection prevention and control, and protection of the health workforce

Pillar 7: Case management, clinical operations, and therapeutics

Pillar 8: Operational support and logistics, and supply chains

Pillar 9: Strengthening essential health services andsystems

Pillar 10: Vaccination

The action checklist for readiness and response:

- translates strategic objectives and knowledge into high-level actions to be taken at national and subnational levels;high-level actions to be taken at national and subnational levels:
  - actions that are or can be adapted to different national and subnational contexts, taking into account national and subnational variations in capacity, income, and SARS-CoV-2 transmission.
- lists regional and global support actions under each response and readiness pillar to:
  - support national action plans;
  - accelerate equitable access to new COVID-19 tools;
  - support research and innovation in the response.
- lists current relevant guidance and tools.
- should be used in parallel with the updated monitoring and evaluation framework to assess the impact and inform decision-making.

Actions under each pillar are categorized into three groups that together form the primary components of an iterative response cycle from planning, through implementation, to monitoring and evaluation to inform further planning and decision-making.

Group 1 actions relate primarily to planning, including needs assessments and design, identification and engagement with key stakeholders, and situation and capacity assessments.

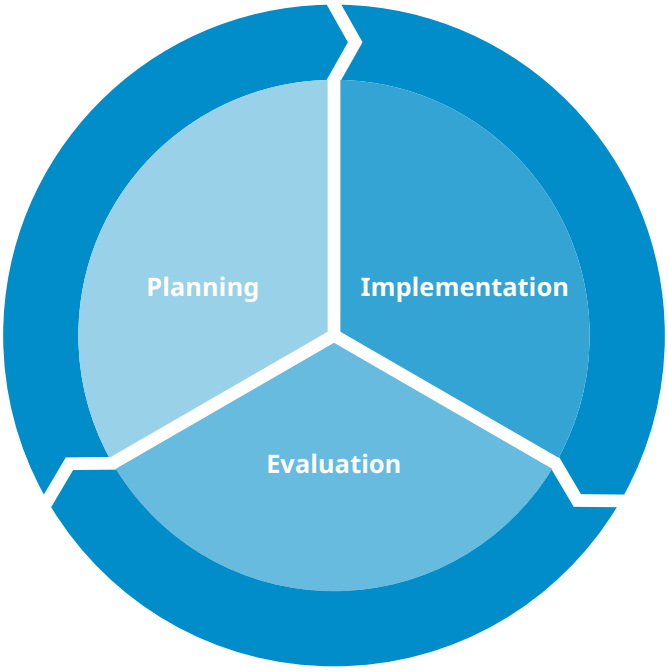
Group 2 actions are focused primarily on implementation.

Group 3 actions are those required to inform the constant adaptation and adjustment of the response, including action related to monitoring and evaluation, field data collection, and data analysis and review.

This *Operational planning guideline* is a living document and will be updated regularly to incorporate new technical guidance in response to the constantly evolving epidemiological situation. National plans should be implemented, in accordance with the principles of inclusiveness, respect for human rights, and equity.

Additional resources to aid national planning and monitoring include:

- the WHO COVID-19 Partners Platform, developed by WHO and launched with the UN Development Coordination Office in 2020, and updated in 2021 to reflect the actions outlined in this document;
- the WHO COVID-19 SPRP 2021 *Monitoring and evaluation framework* (to be published in the first quarter of 2021).



PILLARS

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Pillar 1: Coordination, planning, financing, and monitoring

Inclusive multi-sectoral and multi-partner mechanisms for coordination, planning, financing and monitoring at national and subnational level are essential to avoid the duplication of efforts within and between pillars of the response, ensure there are no gaps in preparedness and response efforts, maximize the availability and efficient allocation of resources including new COVID-19 tools such as vaccines, and support the strengthening of health systems.

More than one year into the COVID-19 pandemic, many countries are now faced with or are at risk of concurrent health emergencies from multiple causes. To support multiple emergency responses, especially in fragile, conflict-affected and vulnerable (FCV) contexts, countries should align coordination, planning, financing and monitoring for the COVID-19 response with broader emergency coordination mechanism. Capacities to be operationally ready for and respond to concurrent emergencies should be evaluated at national and subnational levels, informed by the country emergency risk profile, and national COVID-19 preparedness and response plans adapted accordingly (see Pillar 3 Surveillance). In humanitarian contexts, links with existing emergency response mechanisms including UN coordination mechanisms should be strengthened.

WHO encourages all countries, UN entities and partners to utilise the COVID-19 Partners Platform to plan and coordinate their response with real-time, transparent information sharing. To support monitoring and evaluation of COVID-19 preparedness and response, a revised WHO COVID-19 SPRP 2021 Monitoring and Evaluation Framework will be published aligned with the SPRP 2021 and the key actions outlined in this *Operational planning guideline*. Countries are encouraged to use quantitative and qualitative monitoring and evaluation to inform the response.

Group	National action plans: key activities
1	☐ Review 2020 pandemic preparedness, readiness and response actions and identify key recommendations to improve preparedness and response plans and capacities.
	☐ Review and update the concept of operations at the strategic, operational and tactical levels as needed; engage key sectors, decision makers, partners and stakeholders.
	☐ Review and update multi-sectoral coordination mechanisms at all levels to support COVID-19 emergency preparedness and response actions, including in cities and urban settings.
	☐ Update country-specific operational plan with estimated resource requirements for COVID-19 preparedness and response inclusive of vaccine readiness and research and innovation priorities (see Pillar 10 Vaccination), as well as early recovery investments.
	☐ Integrate vaccine readiness and deployment coordination into existing country COVID-19 multi-sectoral incident management (or equivalent) system or national coordinating committee (see Pillar 10 Vaccination).
	☐ Coordinate within and across other sectors and health pillars (inclusive of private sector, operational partners and civil society).
	☐ Enhance hospital, primary care and community readiness plans including private health care providers; ensure that relevant capacities, space, staffing (surge capacity across response and staff continuity plans) and supplies are adequate.
	☐ Evaluate direct impact of COVID-19 and adapt strategies to different contexts based on local understanding of the pandemic's severity and other health needs. Lessons learned and dissemination of best practices across countries and regions should help to positively readjust strategies.
	☐ Update country monitoring and evaluation systems and metrics to assess the effectiveness and impact of planned measures on COVID-19 control, as well as overall population health, social and economic well-being; produce and share regular situation reports with WHO and partners.
	☐ Map the presence of vulnerable and hard to reach populations, and ensure that they are included in COVID-19 plans.
	Social and economic aspects
	☐ Integrate and continue to promote a 'whole-of-society' approach to coordination, specifically to position the health sector response within the broader socioeconomic response and recovery.
	☐ Liaise and provide public health guidance to socioeconomic sectors for their business continuity planning and adoption of public health measures.
	☐ Strengthen social protection mechanisms for populations in situations of vulnerability, taking into account socio-economic and cultural contexts, and the unintended negative impact of COVID-19 control measures.
	☐ Develop initiatives to reduce out-of-pocket payments and other financial barriers to access health care and essential health services, and mitigate the effect of movement restriction (e.g., free or subsidized access to telecommunications, food supplies, social and income protection).
	Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings
	☐ Align the health sector response with humanitarian and development planning and strategic priorities, including supporting human rights, social cohesion, and livelihoods; and protecting, assisting, and advocating for refugees, IDPs, migrants and vulnerable groups.
	☐ Reinforce coordination across humanitarian, development and government actors (and including civil society and communities as noted above), to identify common solutions for shared operational challenges, such as common supply chains for commodities such as diagnostic tests, therapeutics, PPE, other medical supplies and, COVID-19 vaccines.
	☐ Design/update public health policies with appropriate input from trusted community representatives, and engage communities in the adaptation and implementation of response measures.
	☐ Analyse political/conflict dynamics as a core element of response.

Group	National action plans: key activities
2	☐ Engage all local donors, civil society organizations, and relevant authorities at all levels of government to update preparedness, readiness, and response plans.
	☐ Mobilize relevant partners, including through different networks (GOARN, EMT) to fill critical gaps in different COVID-19 response areas.
	☐ Engage on the COVID-19 Partners Platform to streamline coordination and promote transparency in planning, and track resource needs and external contributions.
	☐ Establish/reinforce two-way coordination and communication from the operational/field-level to the policy level amongst all pillars; ensure mechanisms are in place to collect, analyse and report all data relevant to the response.
	☐ Prepare for regulatory approval, market authorization and post-market surveillance of COVID-19 products such as diagnostics, therapeutics, and vaccines.
	☐ Consult with neighbouring countries, other countries and regional bodies on planning, information sharing, and COVID-19 preparedness and response across sectors, as well as strengthening collaboration and process harmonization though the EOC-NET supported by WHO and partners.
	☐ Conduct simulation exercises to examine country response plans and procedures, and reinforce COVID-19 readiness and response capacities as relevant to country context and technical area.
	Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings
	☐ Continue to engage communities, community-based organizations and local civil society organizations to assess the risks of COVID-19 introduction or spread in their community, and the impact of control measures on livelihoods and access to services.
	☐ Where formal authorities cannot are unable to engage with communities to ensure their meaningful representation in coordination and planning mechanisms, international partners should collaborate with civil society organizations to facilitate community representation.
	☐ Ensure those in situations of vulnerability, including migrants, those living in poverty, and those undocumented in national systems are not left behind as systems and programmes adapt to the outbreak.
3	☐ Undertake continuous assessment of community coordination (e.g., area-based, inclusive, led by local decision makers) to ensure strategy, planning, and implementation are aligned with the principle of equity
	☐ Monitor coordination across humanitarian, development, peace and government actors, inclusive of civil society and communities, for conflict-sensitive pandemic response management.
	☐ Conduct regular reviews (i.e., operational reviews and intra-action reviews (IAR), all hazard risk assessments) to assess implementation success and failures and impact on the epidemiological situation, adjust operational plans as necessary, and share good practices and lessons learned with other countries.
	☐ Document experience to inform longer term preparedness and all hazard risk management, and guide emergency risk management within the health system to promote resilience; use this as input for the revision of National Action Plans for Health Security and their integration in national policies and plans.

Global and regional support

Support to ongoing national action plans

- ☐ Support countries in the conduct of resource mapping to identify existing and potential sources of funding and expertise.
- ☐ Map the linkages between capacity building activities implemented in readiness and response to COVID-19 and in longer-term preparedness for future threats, including in urban settings, and advocate for continued commitment and sustainable financing mechanisms to support them.
- ☐ Support countries in the conduct of simulation exercises and intra-action reviews to improve their existing COVID-19 country preparedness and response plans.
- ☐ Provide guidance to Ministries of Finance, Ministries of Health and other key stakeholders in the national budget dialogue process as to the critical questions that have to be addressed to define what needs to be funded, the resource needs for these, and the relevant budget-holding entities at national and sub-national levels that would receive these funds, in order to best support deploying and delivering COVID-19 tools equitably whilst maintaining essential health systems and services.
- ☐ Develop and support implementation of costing tools for preparedness and response plans, expanded to include vaccination, and assistance to countries provided to cost response plans including vaccination costs.
- ☐ Develop technical notes, draft methodological guidelines, and implementation of guidelines to track COVID-19 expenditure in countries to support accountability and inform their planning and resource allocation decisions.
- ☐ Provide online resources on how to engage the private sector in the COVID-19 response through a global, web-based private sector engagement learning hub, to be used for distributing evidence, tools, and guidance produced by WHO and partners and synchronize efforts to develop tools and guidance by WHO partners.

Support to accelerate equitable access to new COVID-19 tools

- ☐ Support readiness planning and preparedness activities for countries to access COVID-19tools.
- ☐ Help to identify gaps and provide evidence for allocation of all COVID-19tools in an equitable manner.

Research and innovation priorities

- ☐ Support coordinated local and contextualized research.
- ☐ Support research and scoping on governance issues and barriers and enablers to help shape assistance to countries.
- ☐ Support contextualized research on COVID-19 actions in low capacity and humanitarian settings that may involve local adaptations and innovations, and facilitate the learning, contextualization and adaptation of these practices in other settings and countries.
- ☐ Strengthen One Health activities and further develop operational tools to improve multi-sectoral coordination, surveillance, and information sharing mechanisms between stakeholders.

Relevant guidance documents:

- *Critical preparedness, readiness and response actions for COVID-19 interim guidance Public health and social measures for COVID-19 Preparedness and response operations in low capacity and humanitarian settings;*
- *Framework for a public health emergency operations centre (2015);*
- *A UN framework for the immediate socio-economic response to COVID-19;*
- *WHO health emergency and disaster risk management framework;*
- *WHO guidance for business continuity planning;*
- *UHC2030 policy brief on COVID-19 and fragile settings;*
- *UN criticality recommendations in the context of COVID-19;*
- *Considerations on indigenous peoples, afro-descendants and members of other ethnic groups during the COVID-19 pandemic.*

Pillar 2: Risk communication, community engagement (RCCE) and infodemic management

The goal for this pillar is to prevent and reduce the negative impacts of COVID-19 on individuals and communities by using evidenced-based approaches to understand people's perceptions and behaviours, communicate risk through timely, credible and relevant information.[1]

Slowing the transmission of COVID-19 and protecting communities requires a whole-of-society approach with the participation of every member of every community to take action and prevent transmission. People's behaviours, and their willingness and ability to follow public health and social measures remain the most powerful means to stop the spread of the virus. Consequently, there is an unprecedented opportunity to leverage the role risk communication and community engagement (RCCE) in breaking the chains of transmission and mitigating the impact of the pandemic.

There is no one-size-fits-all approach for effective RCCE. Understanding communities and adapting to reflect those insights will look different for every community. New challenges in 2021 include the need to overcome vaccine hesitancy, and to counter and build resilience to deliberate anti-vaccine misinformation in a context of increasing pandemic fatigue.

Evidence-driven, people-centered and community-led approaches have proven successful in many countries. Coordinated, adaptive, innovative, and localized approaches to engage and empower communities will be crucial to achieving the strategic objectives of the SPRP 2021.

1 Tangcharoensathien V, Calleja N, Nguyen T, Purnat T, D'Agostino M, Garcia-Saiso S, Landry M, Rashidian A, Hamilton C, AbdAllah A, Ghiga I, Hill A, Hougendobler D, van Andel J, Nunn M, Brooks I, Sacco PL, De Domenico M, Mai P, Gruzd A, Alaphilippe A, Briand S (2020): Framework for Managing the COVID-19 Infodemic: Methods and Results of an Online, Crowdsourced WHO Technical Consultation, J Med Internet Res 2020;22(6):e19659

Group	National action plan key activities
1	**Facilitate community-led responses through the improvement of the quality and consistency of RCCE approaches**
	☐ Develop/update national COVID-19 RCCE action plans using social data analysis and specifics of the context and community. These plans should reflect community input into effective public health and social measures while addressing community readiness for vaccines, treatments and tests.
	☐ Identify and work with trusted community groups and influencers (e.g. doctors, community leaders, religious leaders, health workers, community volunteers, unions) as well as local groups (e.g. women's and youth groups, associations for people living with disabilities, business groups, traditional healers) to ensure both community inclusion and consistency of RCCE approaches through outreach.
	☐ Identify and map marginalized and at-risk populations to engage with culturally appropriate messages using relevant channels and community networks/influencers.
	☐ Pilot messages through participatory processes. Prepare contextualized messages with communities based on the latest evidence and pilot messages through a participatory process that specifically targets key stakeholders. Where possible, tailor messaging for all sub-population groups.
	☐ Integrate in RCCE dialogue and community leadership the mitigation of effects on livelihoods, reducing demand side barriers to access essential health services, and respond to other health concerns or threats to their survival and dignity.
	☐ Establish mechanisms to embed the voice of communities into decision-making for emergency response (i.e. by nominating community representatives to participate in response planning and implementation)
	☐ Support the creation of agreements between the indigenous or Afro-descendant population and the integrated health services network, through its leaders (both men and women), on the actions that these leaders will take with respect to COVID-19 in their communities.
	☐ Build on RCCE experiences and capacities built during the response to strengthen the role of communities in support of longer-term preparedness and emergency risk management functions, as well as their role in the primary health care approach.
	☐ Work closely with stakeholders addressing the socio-economic impact of the pandemic and public health measures on communities and vulnerable households, and establish links with social protection s.
	☐ Map community-based measures for which Community Health workers and community-based actors can play an important role in implementation and oversight; assign responsibilities, train and provide the necessary support to the community health workforce accordingly.
	Strengthen coordination of RCCE to increase quality, harmonization, optimization and integration
	☐ Activate or strengthen RCCE coordination mechanisms and working groups in coordination with UN agencies, levels of government, civil society and partners to ensure the efficient use of each organization's strength and audience. Ensure participation of community and vulnerable groups.
	☐ Identify and work with existing public health and community-based networks to increase outreach and consistency of RCCE approaches.
	☐ Work closely with relevant committees and advisory groups such as the National Immunization Advisory Group, to ensure RCCE and infodemic objectives are considered within advisory group recommendations.
	☐ Launch or strengthen an independent national alliance of influencers and stakeholders who can advocate, educate, address rumours and misinformation and build vaccine and health literacy.
	Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings
	☐ Work with local influencers, national and international partners including the IFRC, UNICEF and WHO to develop social mobilization and community engagement plans based on existing response mechanisms and contextualized to the setting and its community.

Group	National action plan key activities
2	**Reinforce local capacity and solutions to control the pandemic and mitigate its impacts**
	☐ Map RCCE capacities and systems that need to be strengthened at the national and sub-national level. Wherever possible, capitalize on the resources and political will currently available during the pandemic to create sustainable change that will benefit the response to future emergencies.
	☐ Carefully map where RCCE expertise is needed and recruit as appropriate, providing training whenever necessary.
	☐ Carefully map where RCCE expertise is needed and recruit as appropriate, providing training whenever necessary.
	☐ Establish RCCE leadership at all levels with the necessary authority to coordinate partners.
	☐ Introduce and enforce SOPs for RCCE if not already established as a central coordination and quality assurance tool.
	☐ Strengthen and maintain information and communication technology (ICT) infrastructure, networks and staff, and prepare for surges in demand across sectors and levels.
	☐ Ensure communication and information is accessible through culturally-appropriate, high-quality communication campaigns.
	☐ Include messages on coping with stressors and access to self-help tools and community based mental health and psychosocial support resources, as a component of risk communication and community engagement.
	☐ Use two-way communication to discuss community actions and solutions. These can be established through social media, complaints mechanisms, and direct dialogues and consultations to ensure community feedback informs response measures, and the response is accountable to affected populations.
	☐ Build community capacities for resilience (i.e., health literacy, health mediators, contact tracing volunteers).
	Manage the infodemic
	☐ Ensure that individuals and communities have evidence-based relevant information at the right time from their trusted sources of information to make informed decisions, and that rumours, misinformation and disinformation can be identified and effectively managed.
	☐ Establish an infodemic task force as part of the RCCE working group that comprise of existing roles and activities (hotline operators, social media analysts, community engagement and risk communicators) to manage overabundance of information, including misinformation and disinformation.
	☐ Design and implement a decision-making tool to decide if, when and how to counter mis- and dis-information.
	☐ Based on information collected regularly via social listening systems, identify misinformation early and regularly address rumours with evidence-based relevant information using the channels through which the rumours spread. Ensure that guidance dispels rumours, misinformation and disinformation.
	☐ Ensure consistent communication mechanisms are in place to share data needed for course correction, inform strategic communications and broader response decision-making processes.
	☐ Communicate clearly, honestly and regularly and ensure two-way communication mechanisms are in place to co-design communication solutions with community.
	☐ Disseminate empathetic and contextualized messages and materials in local languages and via relevant trusted communication channels. Risk communication should openly address uncertainty, describe the level of risk and respectfully address public fear and concern.
	☐ Educate the population about misinformation and disinformation to ensure that they are part of the solution and able to identify and stop mis and disinformation.

Group	National action plan key activities
2	**Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings**
	☐ Provide timely, accurate and trusted information that responds to community needs and that is focused on what individuals and communities can do to halt the spread of the outbreak.
	☐ Address social stigma and marginalization through capacity building and provision of support to affected individuals.
3	**Generate, analyse and use evidence about community context, capacities, perceptions, and behaviours**
	☐ Monitor the effectiveness of the RCCE plan and document lessons learned to inform future preparedness and response activities, including for concurrent and future health threats and emergencies. National all-hazards RCCE preparedness plans should be revised accordingly.
	☐ Monitor the communication and community engagement actions that aim to facilitate trust and population adherence to public health measures.
	☐ Monitor the coordination of communication between different sectors of society.
	☐ Activate or strengthen social listening systems and formative research to understand why people may or may not adopt and or maintain protective measures, barriers to access essential services and the individual, and social and structural drivers of behaviour change. Bring together multiple formal and informal sources of information. Where possible use rapid qualitative and/or quantitative methodologies (surveys, audience analysis) to:
	○ understand community knowledge/perceptions, behavioural drivers/barriers including health seeking behaviours, concerns/FAQ, misinformation;
	○ identify power populations/ influencers, populations affected/ most at risk, religions/languages; and,
	○ map key communication patterns/ channels.
	☐ Ensure consistent communication mechanisms are in place to analyse and share data needed for course correction, inform strategic communications and broader response decision making processes.
	☐ Conduct an intra-action review specific to RCCE and infodemic management during the COVID-19 response for course correction and improvement.
	Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings
	☐ Identify and document good practices of public health and social measures for COVID-19 in these settings that may involve local adaptations and innovations, and facilitate the learning, contextualization and adaptation of these practices in other settings and countries.

Global and regional support
Support to ongoing national action plans
☐ Continued quantification of the extent and influence of information disseminated and consumed through the web, mass and social media, chat apps, face-to-face and other traditional information channels.
☐ Continue to develop and disseminate regional-level guidance and templates for many RCCE aspects of the response (i.e. RCCE strategy templates for countries, for contact tracing, hotlines, media, youth, vaccines) as well as webinar series for capacity building, support to plans revision, social listening, message testing, and in-country partner coordination.
Support to accelerate equitable access to new COVID tools
☐ Support the Collective Service – launched in June 2020 by WHO, UNICEF and the IFRC with support from GOARN, the Bill & Melinda Gates Foundation and other key stakeholders – which coordinates with all community facing groups within the ACT-Accelerator and supports their work by promoting and facilitating synergies and connections between these groups and countries and ultimately communities.
Research and innovation priorities
☐ Continue to work with partners including UNICEF and IFRC to establish a scalable, collaborative, research platform that will continue to build the evidence required to inform infodemic policy both during and between health emergencies such as COVID-19.
☐ Continue to develop and implement innovative tools for social listening. For example, in the WHO European Region, the HealthBuddy+ and the Behavioural Insight tools will continue to be supported.

Relevant guidance documents:

- Welcome WHO page to COVID-19: *Risk communication and community engagement guidelines;*
- *EPI-WIN: WHO information network for epidemics;*
- *Global framework for risk communication and community engagement;*
- *Ten principles for RCCE readiness checklist, being finalized;*
- *Operational guidance on accountability to affected population;*
- *Community-based health care, including outreach and campaigns, in the context of the COVID-19 pandemic.*

Pillar 3: Surveillance, epidemiological investigation, contact tracing, and adjustment of public health and social measures

COVID 19 surveillance data are essential to detect cases, monitor the geographical spread and transmission intensity of the virus, track trends in age, gender and vulnerable population and settings, assess impacts on health-care services, and adjust appropriate and proportionate public health and social measures (PHSM), as well as to adapt to new developments such as vaccine introduction, evolution of virus variants, and findings from research and development. In settings where large-scale testing of suspected cases is limited or not possible, it is important to: 1) monitor overall trends for mortality or respiratory diseases, based on syndromic surveillance; and 2) undertake early detection of SARS-CoV-2 spread through laboratory confirmation, focusing on a limited number of cases within clusters, with a focus on health workers, those with severe disease, and closest contacts.

Countries are encouraged to undertake relevant epidemiological investigations, including aligning with sero-epidemiological standardized investigation protocols (Unity Studies), which aim to increase quality evidence-based knowledge for action. This global standardization initiative promotes the use of standardized epidemiological study designs and laboratory assays to inform key epidemiological parameters such as transmission patterns, immunity, severity, clinical features, and risk factors. All countries are encouraged to adopt international WHO R&D Blueprint efforts and protocols and use evidence-based knowledge for action.

Contact tracing – along with rapid testing, isolation and care of identified cases – is a key strategy for interrupting chains of transmission of SARS-CoV-2 and reducing COVID-19-associated mortality. It can also be used to find a source of infection by identifying settings or events where infection may have occurred, allowing for targeted public health and social measures. In scenarios where it may not be feasible to identify, monitor and quarantine all contacts, prioritization for follow-up should be given to contacts at a higher risk of infection based on their degree of exposure; and contacts at a higher risk of developing severe COVID-19. Digital tools can enhance contact tracing for COVID-19, but ethical issues around accessibility, privacy, security and accountability need to be considered as they are designed and implemented.

In addition to understanding the transmission scenarios present in a country with the greatest granularity possible, it is important to also track health system capacity and performance; including hospital and ICU bed occupancy rates, as well as the health system's ability to continue providing non-COVID-19 services. The combination of these two dimensions (transmission level and health system capacity) will inform the appropriate application of locally tailored public health and social measures. Stringent PHSM to control COVID-19 can have considerable social and economic costs and should be agreed on with the participation of relevant sectors, implemented with the full understanding and participation of communities, and based on the principle of doing no harm. Measures should be based on a risk assessment, aligned with community inputs, proportionate, and should be regularly reviewed, in line with WHO guidance. Potential harm from PHSM to control COVID-19 should be mitigated through measures to support the most vulnerable, provide continuity of essential services, and protect livelihoods. Mitigating policies to address those impacts such as widening social protection need to be put in place. The rationale and intended public health benefits of implementing PHSM must be effectively communicated to the affected populations, and communities engaged to own and participate in the measures.

In low-resource and humanitarian settings, critical measures for COVID-19 prevention and control that have been central to the response in higher resource settings may be more difficult to implement and potentially more harmful. In addition, capacities for testing, isolating and treating those who develop the disease, and tracing and quarantining contacts, may be severely lacking owing to weaker health systems. Moreover, health service disruptions in these settings have been substantial, and barriers on both the supply and demand sides have increased, resulting in increased morbidity and mortality risk from non-COVID-19 causes. Health actors working in fragile settings should focus on monitoring and reducing all-cause excess morbidity and mortality, based on local understanding of the pandemic's severity and other health needs. Health strategies may now need to prioritize protecting and safely restoring non-COVID-19 related essential health services, alongside feasible and proportionate COVID-19 control measures and investment in mechanisms to monitor health outcomes beyond COVID-19.

Group	National action plan key activities
1	☐ Assess and adapt national surveillance capacity to collect, manage, analyze, interpret and report data in a timely manner from subnational to national level in order to: ○ estimate the burden of the disease; ○ monitor viral changes (variants, severity) and impact on vaccines, therapeutics and diagnostic tests; ○ identify the most vulnerable groups or settings for targeted interventions; ○ monitor impact on healthcare system (access and use); ○ inform appropriate mitigation such as adjustment of public health and social measures.
	☐ Ensure integration of COVID-19 surveillance in existing platforms such as the Early Warning Alert and Response System (EWARS), event-based surveillance, influenza or Integrated Disease Surveillance and Response (IDSR); and use digital platforms where possible for real-time information sharing.
	☐ Conduct capacity assessment and risk analysis for specific settings, including mapping of vulnerable populations or events such as mass gatherings.
	☐ Identify needs to strengthen contact tracing, active case finding, isolation, cluster investigation, as well as testing at all levels.
	☐ Identify needs to strengthen diagnostic capacity at all levels. If capacity is insufficient, prioritize testing and measures that can reduce spread (e.g. isolation of cases) in accordance with WHO guidance.
	☐ Assess the need to include in surveillance strategy the use of genetic and serological surveillance or sero-epi studies, with the aim to measure the effective extent of infection in the general population or subpopulations and the proportion of undetected or unreported infections (e.g. asymptomatic infections, insufficient testing capacity, or people who do not seek or cannot afford to seek care).
	☐ Engage with multisectoral household or community surveys that monitor adherence to PHSM, socio-economic impacts, and COVID-19-induced barriers to basic needs including health.
	☐ Conduct a risk–benefit analysis using defined indicators adapted to the existing systems and local context to decide when control measures need to be adjusted, in accordance with WHO guidance. Develop thresholds to scale up and down PHSM.
	☐ Use local situation assessments (transmission level and response capacity and performance) to guide actions or changes to the response strategy, particularly with respect to adjustment of PHSM.
	☐ On the basis of assessments above, new knowledge and lesson learned, develop and regularly update: a) COVID-19 national surveillance strategy / guidelines including on public health and social measures (e.g. in schools, workplaces and Points of Entry (POE) settings where applicable); and b) COVID-19 national contact tracing strategy including international contact tracing; as well as case definition and investigation protocols in line with WHO guidance.

Group	National action plan key activities
1	**Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings**
	☐ For FCV and humanitarian settings, surveillance strategy should focus on overall causes of mortality, EWARS, and sentinel respiratory disease (ARI, ILI, SARI) monitoring. Use proxy indicators that can be collected within existing capacities and systems, such as hospital and ICU occupancy rates for respiratory infections and syndromic surveillance at community and primary care levels.
2	☐ Disseminate national case definitions and investigation protocols to health and community workers (public and private sectors) in line with WHO guidance.
	☐ Enhance COVID-19 surveillance to detect suspect cases within 48 hours of symptom onset, with testing of suspect cases within 24 hours of detection using event-based surveillance from communities and hospitals, respiratory disease or infection surveillance systems, or sentinel sites, hospital-based surveillance, and investigation of clusters.
	☐ Enhance surveillance for residential facilities and for vulnerable groups.
	☐ Ensure community-based health workers have the necessary knowledge, protection and resources to immediately investigate clusters, scale up case management, and conduct individual isolation of cases, scale up contact tracing and quarantine of contacts.
	☐ Identify, follow up, and whenever possible quarantine contacts for the 14-day incubation period of the virus; actively engage communities for contact tracing, with a focus on high-risk settings.
	☐ Train sufficient contact tracing workforce to respond to demand. Contact tracing capacity may be stretched and should then prioritize the identification and investigation of new clusters, high risk settings and those at risk of severe disease.
	☐ Maximize laboratory capacity, including at subnational and in FCV and humanitarian settings, and promote use of well-performing and validated laboratory methods and assays.
	☐ Analyze epidemiological data to identify key drivers of transmission, risk groups, impacts of public health and social measures, and other information relevant to local risk assessments and policy decisions.
	☐ Produce and disseminate weekly epidemiological reports to all levels and international partners, with robust and timely epidemiological data to continuously inform risk assessment and support operational decision-making for the response.
	☐ Undertake case-based or weekly aggregated reporting to WHO, as per WHO guidance.
	☐ Share with the global community all data necessary to conduct global and regional risk assessments, including anonymized surveillance data, clinical data, seroprevalence results, case fatality ratio, and specific information about high-risk groups (pregnant women, immunocompromised), health workers, and children.
	☐ Put in place measures to prevent and address the negative socio-economic consequences of public health and social measures.
	☐ Conduct a tabletop exercise to conceptualize the management of ongoing (local) COVID-19 outbreaks in the country, while minimizing social and economic disruption through effective public health and social measures.
	Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings
	☐ Enhance event-based surveillance, case-detection and reporting capacities in health care facilities and the community.
	☐ Increase screening capacities for signs and symptoms in the community and important communal facilities.
	☐ Test suspected cases according to testing strategy and capacities. In settings where testing all suspected cases is not possible, prioritize testing as per WHO guidance i.e. laboratory confirmation of a limited number of initial cases to establish the presence of the virus in the community and follow with syndromic surveillance. Use standardized data definitions to collect and report data disaggregated by gender, age and occupation, at minimum.
	☐ Use syndromic surveillance and diagnosis of exclusion for isolation and clinical care decision making; ensure other morbidities can be detected and treated, especially those with high mortality and/or with readily available tests.

Group	National action plan key activities
3	☐ Analyze epidemiologic data to identify key drivers of transmission, risk groups, impacts of public health and social measures, and other information relevant to local risk assessments and policy decisions.
	☐ Test and document the performance of surveillance mechanisms (focusing on age, gender disaggregation and health worker infections and deaths reporting), and use the findings to improve surveillance and inform future preparedness and response activities.
	☐ Monitor the intensity, geographical spread and severity of COVID-19, and all-cause mortality, in the population in order to estimate the burden of disease, assess the direction of recent time trends and inform appropriate mitigation measures.
	☐ Where capacities allow, monitor viral changes to inform drug and vaccine development, and to identify markers of severe infection.
	☐ Monitor changes in which risk groups are most affected in order to better target prevention efforts.
	☐ Monitor the epidemic's impact on the healthcare system to predict the trajectory of the epidemic curve and inform resource allocation and mobilization of surge capacity as well as external emergency support (Hospital and ICU capacity for beds and oxygen).
	☐ Monitor the impact of any mitigation measures, including at points of entry, to inform authorities so they can adjust the choice of measures, as well as their timing and intensity.
	☐ Monitor whether contact-tracing operations are efficient and effective in terms of tracing contacts of identified cases and in reducing onward transmission.
	☐ Review epidemiological study protocols; address needs for future studies, in accordance with epidemiologic surveillance and contact tracing outcomes.
	☐ Conduct an Intra-Action Review (IAR) specific to surveillance, epidemiological investigation, contact tracing, and adjustment of public health and social measures during the COVID-19 response for course correction and improvement.
	☐ Document lessons learned and build on capacities strengthened during the response to improve epidemic surveillance and emergency related health information systems, for longer term preparedness and response functions.

Global and regional support

Support to ongoing national action plans

- ☐ Provide global COVID-19 cases and deaths data, other epidemiological information, and risk assessments, to support countries and the global community in their response efforts.
- ☐ Provide epidemiological analysis to allow evidence-based global strategic decision-making, such as for global vaccination deployment and R&D prioritization.
- ☐ Support integration of COVID-19 Surveillance in national surveillance plans, with a focus on age and gender perspectives and surveillance for health workers and reinforce sentinel surveillance by continuing to build on and increasingly integrate COVID-19 into influenza detection, preparedness and readiness systems.
- ☐ Coordinate direct and remote technical support for surveillance, contact tracing, and case investigation, including the continued rollout and support of digital case investigation tools (e.g. Go.Data).
- ☐ Support countries to adopt and implement standardized epidemiologic investigation protocols, such as the Unity sero-epidemiology studies, in order to answer questions about what proportion of the population remains at the highest risk, transmission patterns, the presence and duration of any immunity in the population, clinical severity, and risk factors for infection.
- ☐ In FCV contexts, support countries to expand syndromic respiratory disease surveillance systems such as influenza-like illness (ILI) or severe acute respiratory infection (SARI) for COVID-19 surveillance, and combine with other official and unofficial surveillance and contextual data such as community alerts, hospital admission rates and bed occupancy, and overall mortality data to give a more accurate and balanced picture of the incidence of COVID-19 cases and deaths.

Global and regional support
Support to accelerate equitable access to new COVID tools
☐ See above
Research and innovation priorities
☐ Develop additional indicators to more rapidly and accurately assess transmission status, clinical severity, and health system impact to facilitate dynamic adaptation of the response, and integrate with indicators used for other acute respiratory diseases such as influenza.
☐ Use contact tracing, surveillance, standardized epidemiologic studies, and other epidemiologic data and modeling to answer key outstanding epidemiologic questions such as the role of children in transmission and the most effective tools for interrupting transmission in various settings
☐ Adapt objectives of standardized epidemiologic studies according to gaps in surveillance and contact tracing performance.
☐ Design and implement studies aimed at better understanding factors influencing COVID-19 transmission and outcomes in low capacity and humanitarian settings.

Relevant guidance documents:

- *Welcome page to WHO country and technical guidance;*
- *Welcome page to COVID-19: Vulnerable populations and fragile settings technical guidance;*
- *Population-based age-stratified sero-epidemiological investigation protocol for coronavirus 2019 (COVID-19) infection;*
- *Considerations for implementing and adjusting public health and social measures in the context of COVID-19;*
- *Interim guidance on public health and social measures for COVID-19 preparedness and response operations in low capacity and humanitarian settings;*
- *Coronavirus disease (COVID-19) technical guidance: The Unity Studies: Early Investigation Protocols;*
- *Guidance for implementing non pharmacological public health measures in populations in situations of vulnerability in the context of COVID-19.*

Critical preparedness, readiness, and response actions for COVID-19

- *Responding to community spread of COVID-19;*
- *Overview of public health and social measures in the context of COVID-19;*
- *Considerations for implementing and adjusting public health and social measures in the context of COVID-19;*
- *Considerations for public health and social measures in the workplace in the context of COVID-19;*
- *Considerations for school-related public health measures in the context of COVID-19;*
- *Considerations for mass gatherings in the context of COVID-19: annex: considerations in adjusting public health and social measures in the context of COVID-19;*
- *Key planning recommendations for mass gatherings in the context COVID-19. Interim guidance and risk-assessment tools;*
- *Preparedness for cyclones, tropical storms, tornadoes, floods and earthquakes during the COVID-19 pandemic Investing in and building longer-term health emergency preparedness during the COVID-19 pandemic;*
- *Practical actions in cities to strengthen preparedness for the COVID-19 pandemic and beyond;*
- *Guidance for conducting a country COVID-19 intra-action review (IAR).*

Surveillance, rapid response teams, and case investigation

- *Surveillance strategies for COVID-19 human infection: interim guidance, 10 May 2020;*
- *Public health surveillance for COVID-19 – COVID-19 Case definition;*
- *Global surveillance of COVID-19: WHO process for reporting aggregated data;*
- *Considerations in the investigation of cases and clusters of COVID-19;*
- *Considerations for quarantine of contacts of COVID-19 cases;*
- *Contact tracing in the context of COVID-19, currently being updated/ coming next week;*
- *Digital tools for COVID-19 contact tracing;*
- *Ethical considerations to guide the use of digital proximity tracking technologies for COVID-19 contact tracing;*
- *Operational considerations for COVID-19 surveillance using GISRS;*
- *Medical certification, ICD mortality coding, and reporting mortality associated with COVID-19.*

Pillar 4: Points of entry, international travel and transport, and mass gatherings

Efforts and resources in the context of international travel and transport should focus on implementing adequate risk mitigation measures as outlined in the guidance Considerations for implementing a risk-based approach to international travel in the context of COVID-19. These actions must be preceded and informed by a thorough and regular risk assessment, which should take into account: the local epidemiology in departure and destination countries; travel volumes and connectivity between countries; public health and health services capacity and performance to detect and care for cases and their contacts, including among travellers, in the destination country; public health and social measures implemented to control the spread of COVID-19 in departure, and destination countries and the level of adherence in the public; and contextual factors, including economic impact, human rights and feasibility of applying measures, among others. All measures should evidence-based, time-limited and scientifically evaluated. Essential travel should always be prioritized (e.g. emergencies and humanitarian actions, essential personnel, repatriations, and cargo transport for essential supplies such as food, medicines, and fuels).

At the time of writing, the 6th meeting of the IHR Emergency committee regarding COVID-19 pandemic, do not recommend the introduction of "requirements of proof of vaccination or immunity for international travel as a condition of entry as there are still critical unknowns regarding the efficacy of vaccination in reducing transmission and limited availability of vaccines. Proof of vaccination should not exempt international travellers from complying with other travel risk reduction measures". With increasing vaccine supply, these recommendations will be revisited.

Sustainable capacities, including those at points of entry, should be in place for conducting risk assessment for decision-making on travel-related risk-mitigation measures and their implementation during the pandemic. These measures encompass, but are not limited to, risk-mitigation measures that should always be in place such as public health advice to travellers, including for self-monitoring of signs and symptoms; surveillance and case management at the point of entry; international contact tracing; and environmental controls and public health and social measures at points of entry and onboard conveyances. In addition, risk mitigation measures that could be implemented if necessary, based on a prior risk assessment, such as exit and entry screening for signs and symptoms; targeted testing targeting of international travellers; or quarantine for international travellers applied with respect for their dignity, human rights and fundamental freedoms.

Testing resources should never be diverted from high-risk groups and settings where the public health impact is greater, particularly in FCV and humanitarian settings. Hence, the use of testing in the context of international travel should be informed by a thorough risk assessment, and in a targeted manner. Travelers who recovered from a COVID-19 infection and those vaccinated twice should not be exempt from PHSM.

Decisions related to the organization of mass gathering events in the context of COVID-19 should be based on a rigorous risk-based approach. Such approach consists of three steps: risk evaluation, risk mitigation and risk communication – leading to an informed decision on whether the event under consideration should proceed, and on the best arrangements to decrease any associated risk of spread of COVID-19, should it go ahead.

Group	National action plan key activities
1	☐ Develop and adjust COVID-19-related public health protocols at points of entry, including for managing acute events, considering the risk mitigation measures adopted and resulting from the risk assessment, as well as for mass gathering events. ☐ Disseminate regularly to relevant officials and stakeholders in the transport sector, and mass gathering organizers, COVID-19 related epidemiological information, risk assessment, legal and normative provisions/tools, and protocols.
2	**Points of entry** ☐ Conduct regular risk assessments, using global, regional and/or national and local risk data to inform the calibration of risk mitigation measures in the context of international travel and mass gatherings. ☐ Equip and train staff at point of entry in appropriate actions to detect, manage and refer ill passenger(s) and identify their contacts, and to carry out cleaning and disinfection; prepare for novel public health approaches for resumption of international traffic, including at points of entry, as well as public health and social measures, and their implementation at points of entry. ☐ Communicate to travellers information about COVID-19 related entry and exit requirements, prevention, health care, local public health and social measures in place, sanctions for breaching regulations in place. **Mass gatherings** ☐ On the basis of a risk assessment: ○ Evaluate risks associated with planned mass gatherings; ○ Consider restricting, postponing or adapting mass gatherings, by ensuring that physical distancing, use of face masks, hand hygiene and other precautionary measures can be implemented to reduce the potential for SARS-CoV-2 spread, including religious, sports and entertainment events, market attendance, vaccination activities, humanitarian distributions and other assistance; ○ Share the process of empowering individuals and communities to make informed decisions based on scientific guidance. This should include the rationale of methods used, results and if possible, impact. **Special considerations for FCV and humanitarian settings** ☐ Ensure limited testing capacity is reserved for strategically testing high risk/ vulnerable individuals and health care workers, and not absorbed by testing of travellers. ☐ Conduct risk assessments to guide preparedness for response to COVID-19 in refugee and migrant settings specifically around ground crossings, and reinforce screening for signs and symptoms and access to care in camps and other collective settlements.
3	☐ Regularly monitor and evaluate the effectiveness of travel and mass-gathering-related risk mitigation measures, and adjust protocols according to the results from risk assessments, new evidence as it becomes available, and recommendations from WHO. ☐ Document experience and lessons learned in minimizing transmission of SARS-CoV-2 during international travel for longer term preparedness and response.

Global and regional support

Support to ongoing national action plans

- [ ] Continue to work closely with countries and partner organizations representing aviation, maritime, trade, and tourism sectors to ensure that international travel is always prioritized for emergency and humanitarian actions, essential personnel, repatriations, and cargo transport of essential supplies such as food, medicines, vaccines and fuel; and to ensure that a risk-based approach is applied for decision making on travel related risk mitigation measures in the context of COVID-19. During 2021, as the context is further complicated by the need to support vaccination efforts, this coordination will be all the more vital.
- [ ] Continue to develop joint guidance, training and statements of support to prevent and manage COVID- 91 in the context of international travel and transport, including at ports, airports and ground crossings.
- [ ] Monitor measures taken by governments and private entities that impact international travel and trade, and assess effectiveness of such measures.
- [ ] Continue to support sharing of lessons and experiences from countries on how to apply a risk-based approach to international travel in the context of COVID-19.
- [ ] Continue to develop and disseminate the WHO policy position on the legal, ethical, scientific, and technological considerations related to requirements for proof of COVID-19 vaccination for international travelers, in accordance with relevant IHR provisions.
- [ ] Support countries and mass gathering organizers to evaluate, mitigate and communicate risk of SARS-CoV-2 transmission associated with sports, religious, entertainment and other events including those unplanned/ spontaneous gatherings, with the aim of facilitating the adoption of evidence-based decision making processes in relation to holding, postponing or adapting such events.

Support to accelerate equitable access to new COVID tools

- [ ] WHO will continue to work closely with countries, and travel and transport partner organizations, to understand how various vaccination approaches might impact on risk-based approaches to SARS-CoV-2 mitigation measures related to travel and trade.
- [ ] WHO will coordinate with relevant stakeholders the development of standards for digital documentation and interoperable digital platforms. This will include the documentation of the vaccination status in preparation for widespread vaccine access.

Research and innovation priorities

- [ ] WHO will continue to undertake systematic reviews of the scientific literature on the effectiveness, safety, and potential harms of various public health mitigation measures for SARS-CoV-2 transmission implemented before, during, and after travel via air, sea and in-land, including at points of entry. The resulting knowledge products will be published as a series of scientific briefs or interim guidance documents, as applicable.

Relevant guidance documents:

- *Welcome WHO page for Travel, Points of Entry and Border Health guidance documents;*
- *Welcome WHO page to COVID-19 travel advice;*
- *Considerations for implementing a risk-based approach to international travel in the context of COVID-19;*
- *Risk assessment tool to inform mitigation measures for international travel in the context of COVID-19;*
- *COVID-19 diagnostic testing in the context of international travel;*
- *Interim position paper: considerations regarding proof of COVID-19 vaccination for international travellers;*
- *Management of ill travellers at Points of Entry – international airports, seaports and ground crossings – in the context of COVID-19 outbreak;*
- *Operational considerations for managing COVID-19 cases/outbreak on board ships;*
- *Operational considerations for managing COVID-19 cases or outbreak in aviation;*
- *Controlling the spread of COVID-19 at ground crossings;*
- *WHO public health checklist for controlling the spread of COVID-19 at ground crossings;*
- *Promoting public health measures in response to COVID-19 on cargo ships and fishing vessels;*
- *ICAO Council Aviation Recovery Task Force (CART) Take-off: Guidance for Air Travel through the COVID-19 Public Health Crisis;*
- *Key planning recommendations for mass gatherings in the context of COVID-19 Interim guidance and risk-assessment tools;*
- *WHO. Interim recommendations form Strategic Advisory Group of Experts on Immunization (SAGE);*
- *WHO. Statement on the sixth meeting of the International Health Regulations (2005) Emergency Committee regarding the coronavirus disease (COVID-19) pandemic;*
- *WHO mass gathering COVID-19 risk assessment tool – Generic events/Sports events/Religious events (10 July 2020);*
- *Public health considerations for elections and related activities in the context of the COVID-19 pandemic (10 December 2020).*

Pillar 5: Laboratories and diagnostics

Testing remains one of the most important ways to inform response strategy and subsequently limit the spread of COVID-19. Extensive, systematic, and strategic testing can be used to inform public health and social measures such as contact tracing, quarantining of suspected cases and isolation of confirmed cases, and avoid extensive repeated lockdowns. In addition, genomic sequencing has been critical in detecting and responding to new SARS-CoV-2 variants. Increasing sequencing capacity and access to existing capacity across the world is a high priority during 2021. Improved surveillance and laboratory capacity to monitor variants of concern must be accompanied by prompt sharing of sequences, virus and serum samples via globally agreed mechanisms. There is still an urgent need to scale up diagnostic capacity with a new focus in 2021 to increase research and development efforts to improve the detection of variants, and understand their impact on response measures.

Countries are encouraged to use national data platforms to document critical clinical, epidemiological and virus data that facilitates the detection and assessment of new SARS-CoV-2 variants. In addition, countries should continue to strengthen and sustain domestic diagnostic and laboratory capacity to manage large-scale testing for SARS-CoV-2 at national and sub-national levels, while building on and maintaining the established infrastructure and diagnostic capacity for other relevant diseases.

A national testing strategy should be available that includes a clear structure on coordination and how collaboration with the stakeholders is organized. There should be a national plan that provides clarity on how laboratories and diagnostics are integrated with the other measures in the response. In the event of widespread community transmission, surge plans should be activated to manage the increased volume of samples from suspected cases. WHO can support access to relevant international referral laboratories for confirmatory testing and sequencing and to protocols, reagents, and other supplies through the interagency COVID-19 Supply Chain System.

Group	National action plan key activities
1	☐ Develop and implement a national testing strategy with clear links to defined public health and social measures that covers: ○ Clear in-country coordination structure for national and subnational levels, with links to other national and supranational stakeholders, (see the list of reference laboratories providing confirmatory testing for COVID-19); ○ Test selection and procurement, according to use setting and accessibility, including point-of-care (POC), (see *Diagnostic testing for SARS-CoV-2*); ○ Testing objectives in the local context, each with an appropriate diagnostic algorithm, that can be adjusted according to different transmission scenarios, including consideration for surge capacity; ○ Defined registration process for dedicated testing facilities and clear pathways for sample transport and data communication; ○ A functional laboratory information management system (LIMS) to ensure traceability of results and facilitate data management and sharing; ○ A communication plan for stakeholders and communities to inform when to test; ○ Appropriate prioritization of testing, particularly when resources are constrained (see *Laboratory testing strategy recommendations for COVID-19 testing*); ○ Quality assurance system that includes supervision and audits, standard operating procedures, proficiency testing and participation in international external quality assessment (EQA). ☐ Ensure legislative support is in place, including enforcement of regulations for the transport and sharing of specimens and genomic data, quality and biosafety; ☐ Develop accelerated or designated customs procedures to facilitate import of diagnostic materials and donations. **Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings** ☐ Assess the potential impact of increasing COVID-19 testing capacities on diagnostics for other diseases in the country, not to endanger other disease control s, particularly TB, HIV, viral hepatitis and antimicrobial resistance. ☐ Plan investments for COVID-19 diagnostics with the view of strengthening laboratory capacities in the long term, in alignment with overall disease surveillance and early warning systems. ☐ Ensure specimen collection and transport and testing network are functional and meet testing needs, with a mechanism to rapidly ship samples to international referral laboratories.

Group	National action plan key activities
2	☐ Implement SARS-CoV-2 in vitro diagnostics selection, validation and registration processes, see *Diagnostic testing for SARS-CoV-2, COVID-19 target product profiles for priority diagnostics to support response to the COVID-19 pandemic v1.0*, Emergency Use Listing (EUL).
	☐ Identify gaps in human resources and use to develop and implement training for the laboratory workforce, particularly those involved in specimen collection, transport and testing.
	☐ Increase access to designated SARS-CoV-2 testing facilities and consider integration of diagnostic capacity from other sectors including research, academic or veterinary laboratories, or deployment of rapid response mobile laboratories (RRMLs).
	☐ Develop a SARS-CoV-2 sequencing strategy with specific goals, such as surveillance for variants or targeted populations and identify national, regional or international capacity for sequencing, and leverage existing networks such as GISRS. Ensure timely sharing of genetic sequence data through open access platforms such as GISAID. See WHO interim guidance on SARS-CoV-2 genomic sequencing for public health goals.
	Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings
	☐ Invest in logistics systems for optimal functioning of laboratories including support through deployment of RRMLs.
3	☐ Regularly monitor all processes implemented for SARS-CoV-2 laboratory and diagnostics, evaluate key response aspects and adjust the national testing strategy as necessary, including: ○ Access to testing sites, number of tests performed, number of positive test results and test positivity rates; ○ Turnaround time between sample collection and test result; ○ Performance of in vitro diagnostics; ○ Number of samples sequenced and the timely upload of virus sequence data to open access platforms.
	☐ Document lessons learned and build on laboratory capacities strengthened during the response to improve longer term preparedness.
	☐ Conduct an Intra-Action Review (IAR) for Laboratories and diagnostics during the COVID-19 response for course correction and improvement.

Global and regional support
Support to ongoing national action plans
☐ Continue to develop and disseminate guidance on laboratory and diagnostics.
☐ Continue to expand External Quality Assessment (EQAP) to subnational laboratories.
☐ Work closely with the operational support and logistics pillar and UN Supply Chain task force, to maintain and increase access to supplies of laboratory reagents and consumables.
☐ Support countries to increase access to genomic sequencing for SARS-CoV-2, through national capacity building and international referral and to continually monitor and understand variants of concern through the risk monitoring framework.
Support to accelerate equitable access to new COVID tools
☐ Continue to assess new diagnostic tests for EUL and develop target product profiles for diagnostics.
☐ WHO will continue to lead the development and implementation of a fair and equitable allocation process for COVID-19 diagnostics.
☐ WHO and partners will continue to provide technical assistance to countries to prepare for the introduction and roll-out of COVID-19 diagnostics, including advising on diagnostic strategies.
☐ WHO will provide in-person and virtual trainings through the Health Security Learning and OpenWHO platforms, in all UN languages on laboratory and diagnostic topics.
Research and innovation priorities
☐ Support and conduct implementation research to optimize the use of new or novel tests in different contexts, such as for Ag-RDTs, and contribute to acceleration of equitable access to new COVID-19 tools.

Relevant guidance documents:

- *Diagnostic testing for SARS-CoV-2;*
- *Laboratory testing strategy recommendations for COVID-19;*
- *Antigen-detection in the diagnosis of SARS-CoV-2 infection using rapid immunoassays;*
- *SARS-CoV-2 antigen-detecting rapid diagnostic tests: an implementation guide;*
- *Laboratory biosafety guidance related to coronavirus disease (COVID-19);*
- *WHO reference laboratories providing confirmatory testing for COVID-19;*
- *Guidance for laboratories shipping specimens to WHO reference laboratories that provide confirmatory testing for COVID-19 virus;*
- *COVID-19 target product profiles for priority diagnostics to support response to the COVID-19 pandemic v1.0;*
- *Assessment tool for laboratories implementing SARS-CoV-2 testing: interim guidance;*
- *Laboratory assessment tool for laboratories implementing SARS-CoV-2 testing;*
- *SARS-CoV-2 genomic sequencing for public health goals;*
- *Genomic sequencing of SARS-CoV-2: a guide to implementation for maximum impact on public health.*

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Pillar 6: Infection prevention and control, and protection of the health workforce

Infection prevention and control (IPC) s and practices in health and long-term care facilities and communities should be evaluated using existing standardized tools (e.g. the IPC core components), enhanced for the identification and management of patients infected with SARS-Cov-2, and to ensure the prevention of transmission to staff, between staff, between staff and patients/ visitors/caregivers, and in the community. This includes monitoring at national, subnational and facility level to prevent health care associated infections during the provision of care in non-COVID-19 health services (or settings).

In the event of shortages of personal protective equipment (PPE), it may be necessary to support extended use, safe reprocessing methods or alternatives.

Enabling IPC measures is dependent on access to safely managed water, sanitation, and hygiene (WASH), particularly for vulnerable communities and those populations affected by humanitarian crisis.

It will be critical to incorporate preparedness and readiness in the central coordination mechanism at health facility level to reduce avoidable mortality from COVID-19 and other concurrent emergencies, with particular focus on safety and security of health care personnel and all essential workers.

Interventions to reinforce community awareness and strategies to ensure adherence to public health preventive measures (including physical distancing, proper hand hygiene, respiratory etiquette, appropriate mask use and awareness of the role of ventilation) should be developed, implemented and monitored by multi-disciplinary teams including IPC, epidemiology, risk communication, implementation and social science expertise.

Group	National action plan key activities
1	**Strengthen infection prevention and control in the health system**
	☐ Continue to assess and strengthen IPC capacity for COVID-19, through development and/or strengthening of IPCs according to the WHO-recommended core components and minimum requirements for IPC programmes. This should cover all levels of the healthcare system (e.g. acute, long term and primary care and community, linking to essential health services) including public, private, traditional practices, non -traditional settings that may be utilized for isolation and care of patients, and/or quarantine, such as pharmacies.
	☐ Review and update existing national IPC guidance for health and community care settings. This includes defined patient-referral pathway, in collaboration with case management and implementation of IPC measures, to allow safe health and home care environments and safe delivery with adequate supplies as well as appropriate infrastructure to maintain IPC measures.
	☐ Review and update existing health workers training strategies and plans based on needs assessment.
	☐ Develop safe vaccine rollout plans incorporating IPC measures including hand hygiene, PPE, injection safety and waste management.
	☐ In collaboration with logistics, develop or review a budgeted national PPE plan to ensure access to sufficient quantity and quality of PPE. This includes PPE supply management (stockpile, distribution, quality assurance), identification of IPC surge capacity needs (personnel numbers and competencies), and strategies for appropriate and rational use of PPE in all health and community settings, in collaboration with partners as required.
	☐ Promote research and development with a focus on identifying or improving IPC measures such as PPE innovation, cost-effectiveness of IPC interventions, and studies investigating risk factors for SARS-CoV-2 transmission in health care and infection among health workers.
	☐ Advocate for sufficient safe water and WASH services to allow for IPC measures in healthcare facilities, public and communal spaces.
	Strengthen capacity for implementation of IPC and public health and social measures for reducing or preventing community transmission
	☐ Ensure community guidance includes specific recommendations on IPC measures and referral systems for public places such as schools, markets and public transport, as well as recommendations to community, household, and family for promoting good practices.
	☐ Support occupational health IPC programmes and plans to ensure safe working conditions.
	☐ Develop and implement a country road map for achieving the goals of the WHO/UNICEF Hand Hygiene for ALL initiative in community, public and health care settings.
	Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings
	☐ Identify minimum requirements for IPC measures needed in FCVs and humanitarian settings.
	☐ Develop mortuary plans/contingency plans to manage COVID-19 deaths and ensure safe burial measures are supported while maintaining IPC measures in place.
	☐ Advocate for the inclusion of WASH services in economic response packages to support vulnerable crisis-affected households.

Group	National action plan key activities
2	**Implement and maintain IPC measures in health care settings**
	☐ Implement national and sub-national policies and strategies to ensure the implementation of the WHO minimum requirements of IPC programmes in all health care facilities.
	☐ Identify IPC focal points with the authority and expertise to implement IPC activities and measures at all levels of the health system, applying IPC strategies to prevent or limit transmission of COVID-19 in health and long-term care settings. Prioritize based on risk assessment.
	☐ Adapt, disseminate and implement IPC guidance such as the use of standard and additional precautions for health care settings including home and community care providers.
	☐ Provide training to all health workers and essential staff, according to the national strategy, on IPC measures and on the rational use of PPE in the context of COVID-19.
	☐ Apply IPC measures and provide training of health workers involved in the delivery of the COVID-19 vaccine programme.
	☐ Implement strategies and tools for preventing, investigating and manage health worker infections.
	☐ Mobilize resources and partners to implementation national PPE plan to ensure continuous stock at health care and community level.
	☐ Support implementation of research and development studies focusing on understanding SARS-CoV-2 infection among health workers and improving compliance with IPC measures.
	☐ Implement improvements to water and sanitation for health facility according to the country road maps developed using the WASH FIT tool.
	☐ Ensure adequate IPC and WASH resources for implementation of the Hand Hygiene for All initiative and the WHO global hand hygiene campaign "SAVE LIVES: Clean Your Hands".
	☐ Conduct a health facility and IPC tabletop exercise that aims to examine the implementation of IPC strategies required to prevent or limit transmission of SARS-CoV-2 in health care facilities.
	Implement IPC and public health measures in community settings
	☐ Support access to WASH services in public places and community spaces most at risk, with special considerations for vulnerable collective sites (including for homeless people, migrants, and long-term care populations) and community isolation centres.
	☐ In line with the Framework to Reopen Schools, ensure schools have access to adequate safe water, handwashing stations, cleaning supplies, proper ventilation, and, wherever possible, establish or expand sex segregated toilets or latrines including provisions for menstrual hygiene management.
	☐ Ensure adequate IPC and WASH resources for implementation of the Hand Hygiene for All initiative and the WHO global hand hygiene campaign, "SAVE LIVES: Clean Your Hands".
	☐ Ensure hand hygiene stations are accessible, available, supplied and functioning at all gathering places (markets, clinics, places of worship, public facilities and transport stations) in COVID-19 affected areas, high-risk areas and humanitarian settings.
	☐ Ensure WASH and IPC measures and resources are in place in education settings.
	☐ Implement occupational health IPC programmes and plans to ensure safe working conditions.
	Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings
	☐ Implement IPC and public health and social measures identified as minimum requirements in public and communal settings and facilities including mechanisms to support individuals at risk of complications to stay at home.
	☐ Mobilize resources and partners to make sure safe water is available adequately. When water cannot be provided, hand sanitizers' provision should be ensured.
	☐ Adapt burial ceremonies to reduce transmission risks but meet local cultural, social and religious needs.

Group	National action plan key activities
3	☐ Monitor and evaluate IPC guidance, dissemination, implementation and impact.
	☐ Monitor and periodically evaluate IPC and WASH indicators, reflecting adequate infrastructures and implementation of best practices at the point of care in selected healthcare facilities and public spaces, using standardized tools such as the IPC health care facility response for COVID-19, the Rapid Hospital Readiness checklist, IPC Assessment Framework, the IPC minimum requirements tool, the Hand Hygiene Self-Assessment Framework, hand hygiene compliance observation tools, and the WASH Facilities Improvement Tool; develop and implement action plans according to the results, following a continuous quality improvement process.
	☐ Monitor the continuity of WASH services, supplies, prices and financial sustainability, analyze trends, estimate gaps, and propose corrective actions when needed.
	☐ Evaluate the training strategy, including the impact and effectiveness of IPC training for standard and additional precautions and COVID-19 measures for all health workers', with an aim to prevent health care associated infections and mitigate health worker infections.
	☐ Monitor and evaluate the PPE supply chain management system including for stockouts, quality assurance, etc.
	☐ Collect and report standardized data on health worker morbidity and mortality, disaggregated by gender, age and occupational group, at a minimum.
	☐ Conduct an Intra-Action Review (IAR) for infection prevention and control during the COVID-19 response for course correction and improvement.
	☐ Document lessons learned and build on capacities strengthened during the response to improve IPC for longer term preparedness and response functions, as well as for general safety of services delivered through the PHC approach.

Global and regional support

Support to ongoing national action plans

- ☐ Publish additional online training courses on the OpenWHO platform to provide IPC training for health workers in various settings including non-healthcare settings. WHO will continue to develop and update a variety of training resources on different platforms.
- ☐ Support the implementation of guidelines and trainings with direct deployment of experts and master trainers through WHO's networks.
- ☐ In addition to continuing to play a key role in collaboration with the operational support and logistics pillar in the procurement and distribution of PPE to countries, WHO will continue to update crucial technical specifications on the quality, performance characteristics and related standards of PPE to be used in the context of COVID-19 as well as supporting innovative PPE research.

Support to accelerate equitable access to new COVID tools

- ☐ WHO will work with stakeholders to rapidly understand and forecast IPC needs related to vaccination, activities with particular emphasis on FCV contexts and other low-capacity settings where WHO and partners are likely to fulfill a role as providers of last resort. WHO will provide guidance and training material on IPC measures in the context of COVID-19 vaccination activities, address PPE needs during vaccination activities and monitor the uptake and implementation of guidance.

Global and regional support

Research and innovation priorities

- ☐ Work with countries to better understand the epidemiology and burden of SARS-CoV-2 infections among health workers, and therefore strengthen measures to protect health workers by optimizing the availability, fit and use of personal protective equipment and other infection prevention and control (IPC) measures.
- ☐ Improve the understanding of SARS-CoV-2 modes of transmission, and translation of that evidence into guidance on effective prevention measures.
- ☐ PPE availability, production, rational use, and innovation will continue to receive substantial attention through ongoing expert panel review, scoping literature reviews, and through dedicated efforts to ensure international research and innovation efforts are translated into guidance and implemented.
- ☐ Identify and document good practices for IPC in low capacity and humanitarian settings that may involve local adaptations and innovations, and facilitate the learning, contextualization and adaptation of these practices in other settings and countries.

Relevant guidance documents:

- *Guidelines on core components of infection prevention and control programmes at the national and acute health care facility level;*
- *Minimum requirements for infection prevention and control programmes;*
- *Welcome page to infection prevention and control / WASH guidance documents;*
- *Infection prevention and control during health care when COVID-19 is suspected or confirmed;*
- *Rational use of personal protective equipment for coronavirus disease (COVID-19) and considerations during severe shortages;*
- *Advice on the use of masks in the context of COVID-19;*
- *Advice on the use of masks for children in the community in the context of COVID-19;*
- *Water, sanitation, hygiene and waste management for COVID-19;*
- *Infection prevention and control for the safe management of a dead body in the context of COVID-19;*
- *Infection prevention and control for long-term care facilities in the context of COVID-19;*
- *Cleaning and disinfection of environmental surfaces in the context of COVID-19;*
- *Surveillance protocol for SARS-CoV-2 infection among health workers;*
- *Prevention, identification and management of health worker infection in the context of COVID-19;*
- *Health workers exposure risk assessment and management in the context of COVID-19 virus;*
- *Public health and social measures for COVID-19 preparedness and response in low capacity and humanitarian settings;*
- *Rapid hospital readiness checklist;*
- *IPC health care facility response for COVID-19 WASH facilities improvement tool;*
- *Infection Prevention and Control Assessment Framework;*
- *Hand hygiene self-assessment framework;*
- *Hand hygiene compliance observation tools;*
- *OpenWHO IPC channel;*
- *Health workforce policy and management in the context of the COVID-19 pandemic response.*


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Pillar 7: Case management, clinical operations, and therapeutics

Health service adaptations for the delivery for large increases in the number of patients with suspected or confirmed COVID-19 at national and subnational levels should be implemented. In all health facilities, staff should be familiar with the suspected COVID-19 case definitions, and must be able to deliver the appropriate care pathway, ensuring that patients with, or at risk of, severe illness are treated and referred immediately. A high volume of cases will put staff, facilities, and supplies under pressure. This pressure can be minimized with appropriate surge planning. A COVID-19 referral pathway, which designates appropriate care settings for mild and low-risk moderate COVID-19 patients, may allow for care in the community, at a community facility or at home; and for those with severe or critical disease, care in a hospital that has capacity to give basic emergency and critical care (i.e. monitoring, oxygen therapy and advanced respiratory support) and therapeutics (i.e. corticosteroids). Finally, care after acute illness, for all patients that have had COVID-19, should be implemented in case patients experience persistent or waxing and waning symptoms of Post COVID-19 condition.

Group	National action plan key activities
1	☐ Map vulnerable populations and public and private health facilities and workforce (including traditional healers, pharmacies, long-term living facilities, and other providers), and identify alternative facilities that may be used to provide treatment.
	☐ Continuously assess the management capacity of the health services networks to coordinate with various providers, and to ensure continuity of care.
	☐ Continuously assess the human resources needs (skilled workforce). Take actions to grow workforce capacities.
	☐ Continuously assess availability of biomedical equipment including oxygen source capacity and respiratory devices high flow, BIPAP, mechanical ventilation and associated consumables and accessories. Take actions to avoid unavailability of tools for work force.
	☐ Continuously assess availability of essential medicines, including COVID-19-specific therapeutics (i.e. corticosteroids) to care for COVID-19 patients in either ambulatory or hospital settings. Take actions to avoid unavailability of tools.
	☐ Review health care facilities using facility assessment tools for COVID-19 case management capacities including: readiness to implement diagnostics, therapeutics, vaccines (see also Pillar 10) and other health products; use and availability of biomedical equipment for COVID-19 case management; identify and take action to remedy any gaps in capacity.
	☐ Develop, monitor and update operational plans and assign financial resources for health service delivery to ensure a timely response to the needs of COVID-19 patients.
	☐ Continuously assess and update management processes to respond to the increased demands of COVID-19 patients.
	☐ Continuously assess the burden on the local health system, and capacity to safely deliver primary health care services and other essential health services (see Pillar 9).
	☐ Define regulatory pathways for quality assurance.
	Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings
	☐ Evaluate training level of workforce regarding the use of COVID-19 tools including therapeutics and biomedical equipment.
2	☐ Ensure the implementation of updated, evidence-based recommendations according to local context, and assess the impact of implementation for all patients, including those with mild, moderate, severe and critical COVID-19, and those that may experience the Post COVID-19 Condition.
	☐ Disseminate regularly updated information and evidence, train, and refresh the health workforce in the management of COVID-19, using specific protocols based on international standards and WHO clinical guidance.
	☐ Ensure integration of new therapeutics according to *WHO Living guideline: Therapeutics and COVID-19* as part of a holistic approach that includes the delivery of optimized supportive care interventions according to the *WHO Clinical management of COVID-19 living guidance*, and *WHO SARI Toolkit*. Integrate training packages such as WHO Basic Emergency Care training, and SARI Critical care training into curricula.
	☐ Ensure comprehensive medical, nutritional, psycho-social, and palliative care for those with COVID-19.
	☐ Ensure that mental health support guidance is made available for the care of all patients with COVID-19, and community health workers regardless of where they are being cared for. This includes settings such as home-based care and self-care for those with mild COVID-19 (if self-isolation is the correct care pathway) and acute care for those with severe disease, with specific considerations made for social groups facing social vulnerabilities.
	☐ Ensure availability of and access to quality, safe and cost-effective pharmaceuticals, medical devices, oxygen and other health technologies considered essential for the treatment of COVID-19, according to the level of care and context.
	☐ Set up screening and triage areas at all health care facilities with capacity for isolation of suspected and confirmed cases; set up screening capacities in the community.

Group	National action plan key activities
2	☐ Establish medical surge capacity according to the epidemiological scenario and the health services network context; establish mechanisms to request assistance and facilitate skills and knowledge transfer; establish dedicated COVID-19 treatment areas to effectively isolate and treat all COVID-19 patients, under the EMT standards approach. Surge should take into account the maintenance of essential health services to avoid excess mortality.
	☐ Integrate training packages developed for the management of sudden increased health needs into curricula for different occupations of health workers and managers.
	☐ Strengthen capacities in the first level of care for detection and monitoring of COVID-19 cases in the community, ambulatory management of mild and moderate cases, and referrals (as per clinical guidelines). Emphasize the very limited need for antibiotics in mild and moderate disease and the importance of avoiding inappropriate use and exacerbating antimicrobial resistance. This includes care of patients after acute illness who may have the Post COVID-19 Condition and who require a multi-disciplinary evaluation and management plan; ensure any management plan is carried out in a coordinated manner.
	☐ Maintain routine and emergency health service provision for the population.
	☐ Participate in the WHO global clinical network knowledge exchange platform to aid in the clinical characterization of COVID-19, address challenges and share best practices in clinical care, and foster global collaboration (optional based on country capacity).
	☐ Contribute clinical data on hospitalized COVID-19 patients to the WHO Global COVID-19 Clinical Platform.
	☐ Adopt international R&D Blueprint efforts and research protocols, such as: Monitored Emergency Use of Unregistered and Investigational Intervention protocol; the Solidarity trial for therapeutics; Unity sero-epidemiological studies to investigate epidemiological, virological, and serological characteristics (optional based on country capacity).
	Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings
	☐ Focus therapeutics and roll out of response on interventions for which health work force is already trained such as oxygen therapy, use of dexamethasone.
	☐ Make every effort, mobilize resources and partners to strengthen sustainable oxygen supply system.
3	☐ Monitor use of diagnostics, therapeutics, and vaccines in clinical trials, along the regulatory approval pathway, market authorization, and/or post-market surveillance, as appropriate.
	☐ Monitor performance indicators at patient level to assess whether processes of care are improved. For example, did patients with severe or critical COVID-19 receive corticosteroids? If not, then explain why. Use this information to improve quality of care.
	☐ Use analytics from the WHO Global COVID-19 Clinical Platform at country level to guide actions to improve care.
	☐ Evaluate implementation and effectiveness of case management procedures and protocols (including for pregnant women, children, elderly patients, and immunocompromised patients), and adjust guidance and/or address implementation gaps as necessary.
	☐ Assess the implementation of the WHO COVID-19 research and development road map at the national level.
	☐ Conduct an Intra-Action Review (IAR) for case management, clinical operations, and service delivery during the COVID-19 response for course correction and improvement.
	☐ Document lessons learned and build on capacities strengthened during the response to scale up epidemic case management for longer term preparedness and response functions.

Global and regional support

Support to ongoing national action plans

- [ ] Continue to develop the Living clinical guideline, and subsequently continue with monthly updates of the therapeutic and clinical guidelines based on new evidence available. This will ensure WHO releases the most up to date guidelines to the clinical community and policy makers.
- [ ] WHO has launched the first clinical channel on OpenWHO, which is a comprehensive educational package on the multidisciplinary care of patients with COVID-19, including patients with mild to severe disease, as well as including different disciplines and types of interventions such as home care, rehabilitation, basic emergency care, and critical care.
- [ ] Support the implementation of guidelines with direct deployment of expert trainers taking full advantage WHO's growing clinical networks.
- [ ] WHO will continue to provide material support to countries and ensure that the support delivered during COVID-19 has a lasting positive legacy. WHO has already worked with several countries to train and equip health facilities with oxygen generators to meet any future increase in demand for medical oxygen, and that initiative will expand throughout 2021 to provide oxygen not only to COVID-19 patients, but also for safe surgeries, trauma, maternal and child care and other causes of critical illnesses.
- [ ] WHO will continue to facilitate access to a well-trained, rapidly deployable, certified and largely self-sufficient surge emergency health workforce through the more than 100 Emergency Medical Team (EMT) focal points worldwide, who have worked closely with the EMT secretariat at WHO throughout 2020 to implement and monitor COVID-19 emergency response operations. WHO will provide support to national regulatory authorities for regulatory pathways, oversight and product assessment through prequalification and emergency use listing.

Support to accelerate equitable access to new COVID tools

- [ ] Gather systematic data on how guidelines are implemented in practice across a range of contexts and feed those findings back into the development of updated multidisciplinary guidance. This will contribute to both the ACT-Accelerator therapeutics and Health System Connector pillars to ensure uptake of guidance into national guidelines and into clinical practice at facility level.
- [ ] WHO will collaborate closely with partners across the three major work streams of the ACT-Accelerator therapeutics pillar, in addition to leading work on the equitable access framework for therapeutics.

Research and innovation priorities

- [ ] Continue to enroll participants, centres, and therapies (including antivirals and monoclonal antibodies) into the Solidarity Trial and Unity Studies.
- [ ] Continue to encourage countries, health facilities and institutions to participate in a global effort to collect anonymized clinical data related to hospitalized suspected or confirmed cases of COVID-19, and contribute these data to the Global COVID-19 Clinical Data Platform: a secure, limited-access, password-protected platform hosted on OpenClinica. Countries can use this platform to monitor the clinical characterization and management patterns at national or facility level on a regular basis.
- [ ] Identify and document good practices in community-based and home-based care for mild to moderate COVID-19 cases without risks of complications in low capacity and humanitarian settings that may involve local adaptations and innovations, and facilitate the learning, contextualization and adaptation of these practices in other settings and countries.
- [ ] WHO will continue to advance the research agenda on oxygen and respiratory support to better understand oxygen use for COVID-19 as well as interventions that may reduce need for Intermittent Mandatory Ventilation (IMV).

Relevant guidance documents:

- *WHO living guideline: Therapeutics and COVID-19 (last update December 2020)*
- *WHO living clinical guidance for COVID-19 (last update January 2021)*

Clinical management of COVID-19

- *Clinical care of severe acute respiratory infections – Toolkit*
- *Home care for patients with suspected or confirmed COVID-19 and management of their contacts*
- *Operational considerations for case management of COVID-19 in health facility and community*
- *Severe Acute Respiratory Infections Treatment Centre*
- *Recommendations: Prehospital emergency medical services (EMS) COVID-19*
- *Use of chest imaging in COVID-19*
- *Maintaining a safe and adequate blood supply during the pandemic outbreak of coronavirus disease (COVID-19)*
- *Global COVID-19 clinical characterization case record form:*
  - *Rapid core case report form*
  - *Pregnancy case report form*
  - *Case report form for suspected cases of multisystem inflammatory syndrome (MIS) in children and adolescents temporally related to COVID-19*
- *OpenWHO.org: Clinical channel for COVID-19*
  - *WHO SARI critical care training package*

Pillar 8: Operational support and logistics, and supply chains

At country level logistical arrangements to support incident management and operations should be reviewed. Expedited procedures may be required in key areas (e.g. surge staff deployments, procurement of essential supplies, staff payments, staff trained in the use of the Essential Supplies Forecasting Tool). Due to acute supply shortages, the COVID-19 supply chain system (CSCS) was established in 2020 to provide countries with essential supplies for their COVID-19 response.

This platform should also be used to address supply challenges for maintaining essential services where relevant, as under Pillar 9, to allow equitable allocation between all health care providers when there are shortages of supplies. The CSCS is led by the Supply Chain Task Force, which is co-chaired by WHO and WFP, and includes representation from all participating agencies. The CSCS will facilitate the identification, certification, sourcing, allocation and delivery of essential supplies to where they are needed most throughout 2021.

Group	National action plan key activities
1	☐ Engage with the key operation pillars and partners, particularly Laboratories and Diagnostics, Case Management, IPC, and Vaccination to provide estimates of supply requirements based on the 2021 Response Plan, and map/update available resources and supply systems in health and other sectors; and conduct/update in-country inventory review of supplies. Identify central stock reserves, for COVID-19 case management.
	☐ Establish the means to gather key monitoring and performance information, including key performance indicators (KPIs) monitoring of lead times, supply gaps and optimization (efficiency, consumption rates, loss rates, access to local markets).
	☐ Working with the CSCS plan for: (1) transition of longer-term solutions and member state autonomy through the use of Long-Term Agreements (LTAs); (2) sharing of technical guidance; (3) continued access to scarce essential supplies.
	☐ Plan and mobilize correct technical capacity to support operation support and logistics (OSL) planning and implementation functions at national level should they be required.
2	☐ If not already in place, implement supply chain control and management system (quality assurance, stockpiling, storage, security, transportation and distribution arrangements) for medical and other essential supplies.
	☐ Support national delivery and distribution of key COVID-19 supply efforts, as and when required, including review of operational plans, end-to-end logistics set-up, partner mobilization, to ensure the organized flow of supplies (vaccines, diagnostics, PPE, biomedical equipment and therapeutics).
	☐ Facilitate access to information on improved health facility set up and technical designed in support of better patient care, IPC management including ventilation, reduced consumption of essential supplies and improved waste management.
	☐ Support health facilities with improved access to oxygen-therapy options through ensuring provision of technical requirements for correct equipment, human capacity, maintenance options and the current state of infrastructure to support.
	☐ Working with key humanitarian partners, establish playbook for who does what and ensure adequate technical capacity to provide operation support and logistics support role in the direct delivery of supplies, equipment and services for people in hard to reach areas.
3	☐ Identify and support critical functions that must continue such as: water and sanitation; fuel and energy; food; telecommunications/internet; finance; law and order; education; and transportation; and essential workforce.
	☐ Coordinate with supply management for regular health services and with humanitarian supplies and logistics where present, to identify possible integrated solutions for common challenges.
	☐ Document lessons learned and build on capacities strengthened during the response to improve operational support and logistics, including management of stocks within future preparedness and contingency planning, for longer term preparedness and response functions.
	☐ Conduct an Intra-Action Review (IAR) for operational support and logistics during the COVID-19 response for course correction and improvement.

Global and regional support
Support to ongoing national action plans
☐ Refinement of supply planning tools including the Essential Supplies Forecast Tool (ESFT), Disease Commodity Package for COVID-19, critical items list.
☐ Provision of guidance and use-cases for supply interventions that inform need and demand.
☐ Based on forecasts and actual demand data, provide updated reports on financing gaps.
Support to accelerate equitable access to new COVID-19 tools
☐ Based on the CSCS review, plan and implement key recommendations, working closely with the regions to define priority actions, including ensuring correct capacity and resources are available for WHO/OSL regional management.
☐ Continue and improve multi-channel reporting on demand, procurement, shipping and delivery and disseminate data on key bottlenecks and gaps.
☐ Provision of up to date market intelligence on availability, specification, quality assurance and potential procurement channels, opportunities for regionalization/localization.
☐ Ensure that allocation and prioritization is health response-led and is coherent with overall pandemic response strategy.
☐ Coordinate global network of stocks/inventory to enable quick access and shorter lead times to critical supplies.
☐ Put in place special financing mechanisms that enable rapid scale up and support immediate market access.
Research and innovation priorities
☐ Playbook on pandemic response, allocating roles and responsibilities, use of networks such as the Pandemic Supply Chain Network, collaborative hub management in Dubai, China and Addis Ababa.
☐ Data sharing protocols and platform for enhanced visibility, including market data, availability and price.

Relevant guidance documents:

- *Welcome WHO page to COVID-19: Essential resource planning;*
- *COVID-19 Essential supplies forecasting tool;*
- *FAQ: COVID-19 essential supplies forecasting tool (COVID-19 ESFT);*
- *Adapt surge planning support tool;*
- *Health workforce estimator;*
- *Reagent calculator for portal;*
- *Emergency global supply chain system catalogue;*
- *List of priority medical devices for COVID-19 case management;*
- *Disease commodity package for COVID-19;*
- *Technical specifications for invasive and non-invasive ventilators for COVID-19;*
- *Oxygen sources and distribution for COVID-19 treatment centres;*
- *Technical specifications for pressure swing adsorption (PSA) oxygen plants.*

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Pillar 9: Strengthening essential health services and systems

Countries around the world are making difficult decisions to balance the demands of responding directly to COVID-19, with the need to maintain the safe delivery of other essential health services and public health functions. Many routine and elective services have been suspended, and in some cases, restarted and resuspended. Existing delivery approaches are being adapted to the evolving pandemic context as the risk–benefit analysis for any given activity changes. As the outbreak is brought under control and restrictive public health measures are gradually eased, some adaptations in service delivery may need to be reversed, others continued for a limited time, and yet others that are found to be effective, safe and beneficial can be incorporated into routine post-pandemic practice, contributing to longer term health system resilience and progress toward universal health coverage (UHC). The course of the outbreak is likely to surge and recede, and the strategic response must be dynamic and calibrated. Decision-makers should anticipate the need to start, stop and restart adaptations. Regular monitoring of service availability, access barriers and use of health services and health outcomes at all levels of care should guide programming decisions and priorities. Decisions should be aligned with relevant national and subnational policies and should be re-evaluated at regular intervals.

Effective prioritization and implementation will depend on a health system's baseline capacity, the burden of disease, the socio-economic conditions of communities and the COVID-19 transmission context. High priority categories for continuity include preventing and treating communicable diseases; averting maternal and child morbidity and mortality; preventing acute exacerbations of chronic conditions, including mental health conditions, by maintaining established treatment regimens; continuity of critical inpatient therapies; and managing emergency conditions requiring time-sensitive intervention. Routine health promotion visits and elective encounters may be limited, and delivery of vaccinations, antenatal and postnatal care, and sexual and reproductive health services, among others, will likely need to be adapted. Special attention needs to be given to planning for mental health services, given the enormous impact of the pandemic and its indirect consequences.

Ensuring safe and effective patient flow (including screening for COVID-19, triage and targeted referral) remains critical at all levels; but even as pathways to ensure safe delivery of health services are established, access barriers and decreased care-seeking continue to contribute to preventable morbidity and mortality. Effective community engagement is essential to ensure safe and appropriate care-seeking. In many contexts, the response has required a substantial surge or redeployment of health workers; efforts should include optimizing distribution of health worker tasks and roles among interdisciplinary teams, including at community level. Specific programmes should be implemented to protect vulnerable populations (including older adults, people with chronic and immunosuppressive diseases, pregnant and lactating women, children, people with disability, and residents of long-term facilities) and in FCV and humanitarian settings.

Recent investments in primary health care for universal health coverage provide a critical foundation for adapting to the pandemic context. When health systems are disrupted, both direct morbidity and mortality from an outbreak and indirect morbidity and mortality from preventable and treatable conditions increase dramatically. Strengthening systems reduces risk from many threats, including COVID-19and other health conditions, antimicrobial resistance, future epidemics and other emergencies. A well organized and prepared health system has the capacity to maintain equitable access to high-quality essential health services throughout an emergency, limiting direct mortality and avoiding indirect mortality.

See associated operational guidance: COVID-19: Operational guidance for maintaining essential health services during an outbreak and Community-based health care guidance.

Group	National action plan key activities
1	**Establish simplified purpose-designed governance, finance, coordination and monitoring mechanisms to complement response protocols**
	☐ Designate a focal point for essential health services as a member of the COVID-19 IMT, and establish channels of coordination and communication among the IMT, essential health service programme managers and public and private sector service providers.
	☐ Establish (or adapt) simplified mechanisms and protocols to govern essential public and private health service delivery in coordination with response protocols.
	☐ Establish triggers/thresholds for phased reallocation of capacity from routine comprehensive services towards essential services, and for the re-expansion and transformation of services as the pandemic evolves.
	☐ Reduce financial barriers for essential health services regardless of insurance or citizenship status by suspending any co-payments or user fees at the point of care where feasible or by providing cash transfers or vouchers; compensate public and contracted private providers for lost fee income by anticipating and increasing provider payments.
	☐ Conduct functional mapping of health facilities for acute, chronic and long-term care, including those in public, private (commercial and non-profit) and military systems. (This is a shared action with Pillar 7: Case Management).
	☐ Assess readiness and availability of human resources for health to meet needs and to support immunization roll-out.; conduct regulatory review to address waiver requirements; and align resources to rapidly address deficits.
	☐ Create and implement a roadmap for phased implementation and timely scale-up of a workforce hiring, deployment and redistribution strategy.
	☐ Utilize WHO's COVID-19 surge calculators to inform planning and prepare for the workforce gaps.
	☐ Map essential services list to resource requirements, map major public and private distribution centres and assess supply chain constraints.
	☐ Ensure dedicated budgets for national planning and activities for maintaining essential health services.
	☐ Document adaptive responses (e.g. teleconsultation, integrated primary care, remapping of referral pathways) and incorporate capacity gains from the response into PHC strategies to improve system resilience and integration of health security planning within national health strategic plans.

Group	National action plan key activities
1	**Identify context-relevant essential services**
	☐ Generate a country-specific list of essential services (based on context and supported by WHO guidance and tools), ensuring the particular needs of marginalized populations are addressed.
	☐ Identify routine and elective services that can be delayed or relocated to non-affected areas, and create a roadmap for progressive phased reduction and re-introduction of services.
	Special considerations for FCV and humanitarian settings
	☐ Identify the most effective service delivery platforms during acute phases of crises that may involve mass displacement of populations, including health workers, and the risk of destruction or forced closure of health facilities.
2	**Optimize service delivery settings and platforms**
	☐ Coordinating primary care support, adjust hospital admission and discharge protocols to limit duration of inpatient stays as appropriate and appropriate and safe.
	☐ Where safe and appropriate, limit face-to-face encounters by: integrating services across disease programmes, redesigning chronic disease management, increasing self-management, and shifting encounters to digital platforms where appropriate, while ensuring access to necessary medications and supplies.
	☐ Considering re-purposed facilities, concentrate 24-hour acute care services at designated first-level hospital emergency units (or similar), reorient referral pathways, and ensure public awareness of these changes.
	☐ Establish outreach mechanisms and strengthen community-based health care, including increased availability of medicines at pharmacies, as needed to ensure delivery of essential services.
	☐ Disseminate information to prepare the public for changes in service delivery platforms (including outreach and community-based health care), and to guide safe care-seeking behavior.
	Optimize health workforce capacity and protect and support health workers
	☐ Ensure decent working conditions, including implementing occupational health and staff safety measures including psychological support for for all health care workers.
	☐ Initiate rapid training mechanisms and provide job aids for key capacities, including for screening, triage, clinical management, supply chain management, use of digital tools, and essential IPC measures for existing and newly-recruited health workers.
	☐ Ensure mechanism for timely payment of salaries, overtime, sick leave, and incentives or hazard pay, including for temporary workers and community health workers.
	☐ Include training on epidemic preparedness and response in the curricula of all cadres of health workers and health managers.
	Establish safe and effective patient flow (screening, triage, and targeted referral) at all levels
	☐ Disseminate information to inform the public and guide safe care-seeking behavior.
	☐ Ensure that minimum requirements for IPC, including implementation of standard precautions, are in place in all facilities throughout the health system and ensure adequate IPC supplies to guarantee the safe delivery of essential health services.
	☐ Establish screening of all patients on arrival and mechanisms for isolation at all sites using the most up to date COVID-19 guidance and case definitions.
	☐ Ensure acuity-based triage at all sites providing acute care.
	☐ Establish clear criteria and protocols for targeted referral (and counter-referral) pathways among public and private providers.
	☐ Schedule appointments, limit visitors and manage patient flows to ensure distancing, avoid crowding in waiting areas, and create uni-directional flow of patients and staff.

Group	National action plan key activities
2	**Strengthen communication strategies to support the appropriate use of essential services**
	☐ Use multiple communication approaches, including social media channels, to build public confidence and encourage continued utilization of essential services during the outbreak.
	☐ Engage with communities to inform the adaptation of services so they are more responsive to local needs.
	☐ Identify information sources trusted by the public – such as primary care clinics, pharmacies, community health workers and leaders, and peer networks – and ensure these sources are kept up to date about changes in essential service delivery and about available resources, such as hotlines.
	Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings
	☐ Establish a system through front-loading budgets and pre-funding public and private providers, contracting and reimbursement mechanisms, equity funds or voucher systems.
	☐ Negotiate with agencies implementing social cash transfers to include a proportion for health.
	☐ Make access to health care independent of migration status.
	☐ Continuously adjust service delivery platform to the evolution of humanitarian emergency, taking into consideration population displacement and the forced closure of health facilities.
3	**Strengthen the monitoring of essential health services**
	☐ Conduct an Intra-Action Review (IAR) for Maintaining core health systems functions and essential health services during the COVID-19 response for course correction and improvement.
	☐ Assess and monitor utilization of essential health services and barriers, including financial, gender-based, geographical and cultural barriers to utilization, and identify solutions in close collaboration with communities.
	☐ Anticipate restoring suspended services based on changing needs as public health measures are gradually eased and address any new barriers to access.
	☐ Where possible, integrate community-based reporting with facility-based health information systems to maintain a comprehensive approach to monitoring service delivery and utilization.
	☐ Conduct rapid health facility assessments to monitor the evolving capacity to provide essential health services; assess disruptions, mitigation approaches, capacity for screening and triage, workforce capacity and the availability of essential medicines and supplies (including PPE).
	☐ Create a dedicated platform for monitoring inventory and stockouts of essential medications, equipment and supplies, and for the coordination of re-distribution of supplies.

Global and regional support

Support to ongoing national action plans

- [ ] Continue to update WHO's guidance *Maintaining essential health services: operational guidance for the COVID-19 context* (first published in March 2020, updated in June 2020 and to be further revised in early 2021.
- [ ] Coordination of WHO and partner efforts for rapid service readiness assessments in health facilities, supported by the WHO suite of health service capacity assessments.
- [ ] Continue monitoring and disseminating information on disruptions of essential health services, through WHO pulse surveys in all regions.
- [ ] Provide support to update COVID-19 preparedness and response plans, to ensure health system functions (including the maintenance of essential services) are well incorporated in emergency planning and management.
- [ ] Strengthen health workforce capacity for the pandemic response monitoring the availability and safety of health workers, ensuring training and support and assessing health worker infections and estimating health workforce requirements for surge and vaccine roll outand providing guidance on role optimization. Provide dedicated support to countries in health service continuity planning at service delivery and subnational level, in alignment with the principles of the *Maintaining essential health services: operational guidance for the COVID-19 context.*
- [ ] In low capacity and humanitarian settings WHO will work with countries and partners to ensure that investments in COVID-19 response capacities are made in the context of a coherent approach to strengthening health systems.

Support to accelerate equitable access to new COVID tools

- [ ] WHO will work with partners and countries to support effective monitoring of health system performance to identify bottlenecks to the dissemination of vaccines, diagnostics, therapeutics, and PPE.
- [ ] WHO will provide ongoing guidance on engagement of communities and risk communication to support effective dissemination of COVID tools to facilitate.
- [ ] population trust in the capacity of the health system, encourage appropriate care-seeking and acceptance of public health interventions, such as vaccines. WHO will work with partners and countries to develop tools to assess and track service readiness, continuity of essential health services, health worker capacities and their protection and community perceptions, barriers to access health care, and vaccine acceptance.

Research and innovation priorities

- [ ] Identify the most effective shifts in service delivery, including use of digital platforms, to reduce transmission risks and enhance continuity of care.
- [ ] Develop secure digital health strategies with an emphasis on support for self-care and clinical decision support for frontline health workers.
- [ ] Identifying operational challenges for practical and meaningful community engagement, to build trust, ownership and account for concerns around NFI, and barriers to access services.
- [ ] Identify and document local adaptations and innovations to maintain essential health services in low capacity and humanitarian settings.

Relevant guidance documents:

- *Welcome WHO page: Essential health services and systems;*
- *Maintaining essential health services: operational guidance for the COVID-19 context interim guidance;*
- *Community-based health care, including outreach and campaigns, in the context of the COVID-19 pandemic;*
- *Harmonized health service capacity assessments in the context of the COVID-19 pandemic:*
  - *Rapid hospital readiness checklist;*
  - *Biomedical equipment for COVID-19 case management - inventory tool;*
  - *Diagnostics, therapeutics, vaccine readiness, and other health products for COVID-19;*
  - *Ensuring a safe environment for patients and staff in COVID-19 health-care facilities;*
  - *Infection prevention and control health-care facility response for COVID-19;*
  - *Continuity of essential health services: Facility assessment tool;*
  - *Recommendations to Member States to improve hand hygiene practices to help prevent the transmission of the COVID-19 virus guiding principles for immunization activities during the COVID-19 pandemic;*
  - *FAQ: Immunization in the context of COVID-19 pandemic.*
- *Framework for decision-making: implementation of mass vaccination campaigns in the context of COVID-19;*
- *Preventing and managing COVID-19 across long-term care services: Policy brief;*
- *Preventing and managing COVID-19 across long-term care services: Web annex;*
- *Considerations for implementing mass treatment, active case finding and population-based surveys for neglected tropical diseases in the context of the COVID-19 pandemic;*
- *Considerations for the provision of essential oral health services in the context of COVID-19;*
- *Health workforce policy and management in the context of the COVID-19 pandemic response.*

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Pillar 10: Vaccination

As COVID-19 vaccines receive approval through WHO PQ process (and/or EUL) and national regulatory authorities, countries must prepare for their introduction and deployment. Adequate preparation requires early planning, regulation, policy, communications, training, logistics, legislative actions, infrastructure, operations, data systems, and other areas that must be reviewed and made ready to ensure successful and timely distribution of vaccines. This process should be based on WHO's fair and equitable access and allocation framework, and follow guidance issued by WHO's Strategic Advisory Group of Experts on Immunization (SAGE).

Countries are recommended to develop end-to end National Deployment and Vaccination Plans (NDVP) and use the Vaccine Introduction Readiness Assessment Tools (VIRAT/VRAF 2.0) to monitor progress NDVP preparation and implementation. The NDVP and VIRAT help structure the process of introducing a COVID-19 vaccine(s) into national immunization programmes, and to monitor, manage and communicate safety issues. This preparation process includes technical assistance from WHO to ensure a safe, secure, and effective deployment.

Successful implementation of mass vaccination rollout at this speed and scale is challenging in all countries, but in particular in fragile, conflict-affected and vulnerable (FCV) settings. Vaccine overage in FCVs may be less than optimal. Large-scale programmes and funding bring important opportunities, but also risks of further fragmenting health systems. Reaching populations such as migrants, undocumented people, and indigenous populations will require differentiated strategies, adapted to specific contexts.

The actions outlined below are adapted from the VIRAT/VRAF 2.0 and the NDVP guidance document to support countries in their vaccine planning and implementation processes.

Group	National action plan key activities
1	**Coordinate and plan vaccine introduction**
	☐ Establish a National Coordinating Committee (NCC), or engage an existing committee, for COVID-19 vaccine introduction with terms of reference, roles and responsibilities and regular meetings, including relevant sub technical working groups.
	☐ Develop a National Deployment and Vaccination Plan (NDVP) with inputs from relevant bodies and in line with WHO guidance and SAGE recommendations (Values Framework, Population Prioritization, and product specific), including COVID-19 vaccine programme costs (vaccine and supplies, operating costs, HR and capital costs), and a plan for vaccine and immunization of vulnerable populations (e.g. refugees, migrants, displaced persons), including those in settings outside government control.
	☐ Identify and plan a national vaccine access/procurement approach (e.g. COVAX Facility, bilateral purchase agreement, procurement through UN agency, self-procurement), ensuring that the procurement plan and purchasing strategy includes vaccines, ancillary supplies, and Personal Protective Equipment (PPE).
	☐ Support the adoption of efficient and expedited regulatory pathways for approval and regulatory oversight of COVID-19 vaccines (i.e. emergency use authorization, exceptional approval/approval mechanism based on reliance/recognition, abbreviated procedure, fast track, etc.), including risk-based pharmacovigilance and post marketing surveillance of products.
	☐ Assess required logistical procedures, as well as dry storage and cold chain capacity and infrastructure needs at all levels with regards to the COVID-19 vaccines characteristics and develop a plan to fill the identified supply and logistics gaps.
	☐ Review and address specific training requirements of the involved staff for vaccination and reporting events.
	☐ Ensure any necessary policies or mechanisms (including legislation) are updated or in place to enable the indemnification of vaccine manufacturers against any losses they may incur from the deployment and use of COVID-19 vaccines.
	☐ Become informed about the availability of, or establish, compensation schemes in the event of serious health consequences as result of vaccines, including no-fault liability funds, and ensure that associated policies, legislation (if needed) and communication are in place.
	☐ Brief key ministries, National Immunization Technical Advisory Groups (NITAG), stakeholders and partners about COVID-19 vaccine introduction and their expected roles. Inform regularly & disseminate global and regional guidance (i.e. SAGE) with NITAGs and Regional Immunization Technical Advisory Groups (RITAG) and support NITAG working groups on COVID-19 vaccines.
	☐ Ensure NITAG and associated working groups, or the equivalent, are established and resourced to enable a policy recommendation/advice on the use of COVID-19 vaccines.
	☐ Using NITAG prioritization recommendations, review epidemiological data and operationally define target populations that will be prioritized for access to vaccines, estimate their numbers, and develop a delivery strategy for reaching these populations.
	☐ Ensure that the data related with underlying health conditions are captured in the health information system to help planning the prioritization of vaccination for populations at risk for severe COVID-19.
	☐ Ensure a safety coordinating committee is in place.
	☐ Include COVID-19 vaccine programme costs (vaccine, operating costs, human resources and capital costs) in government budgetary and/or planning documents approved by the appropriate authority; in addition, include appropriation or allocation (from Ministry of Finance or Ministry of Treasury) in the cash planning as an additional means to ensure that financing is readily available.
	☐ Identify funding gaps in operational costs and if needed apply to multilateral back funding and in-country donor funding.

Group	National action plan key activities
1	**Special considerations for fragile, conflict-affected and vulnerable settings, including humanitarian settings**
	☐ Agree on context-specific vaccination strategies in fragile settings – including appropriately prioritized/sequenced public health goals (for example, protecting health workers and older adults) and then wider goals, using SAGE population prioritization.
	☐ Plan for how to identify and reach high-risk individuals, the elderly, those with exacerbating underlying conditions, and health care workers (in private and public sectors), including in areas not under government control, as well as those in areas under government control who may be excluded or not covered by the public health system (e.g. detainees, migrants and refugees, and stigmatized populations.
	☐ Prioritize available vaccine stocks appropriately based on risks and vulnerabilities so that populations are reached progressively on the basis of need.
2	**Ensure regulatory preparedness**
	☐ Ensure the national regulatory authority or other concerned authority has clarified the regulatory requirements, and documents needed for regulatory approvals of COVID-19 vaccines and related supplies. The expected timeline: Maximum 15 days based on reliance to WHO Emergency Use Listing (EUL) or SRAs Emergency Use/Conditional Authorization (EUA).
	☐ Ensure that regulatory procedures are in place for import permit of COVID-19 vaccines and related supplies, and identify the requirements and documents needed to import COVID-19 vaccines and related supplies, including for taxes and tariffs.
	☐ Confirm to WHO and UNICEF the existence of an expedited import approval from appropriate authorities. Timelines and maximum number of days should be mentioned. (Expected timeline: maximum 5 working days.)
	☐ Ensure COVID-19 vaccines can be released (lot release) in less than two days by reviewing the summary lot protocol only (testing is not required). Identify the requirements and documents needed for national regulatory authority (NRA) lot release for COVID-19 vaccines. Timelines and maximum number of days for lot release process should be mentioned.
	Optimize service delivery
	☐ Update protocols for infection prevention and control measures including adequate personal protection equipment to minimize exposure risk during immunization sessions.
	☐ Identify and implement COVID-19 vaccine delivery and outreach strategies leveraging both existing vaccination platforms and non-vaccination delivery approaches to best reach identified target groups.
	☐ Ensure vaccination supports re-establishment of other essential health services, without excessively diverting resources such that services are further disrupted.
	Plan training and supervision
	☐ Develop a training plan at all levels to prepare for COVID-19 vaccine introduction, including adaptation of training materials, and identification of key training partners and training methods (in-person or virtual).
	☐ Ensure availability of plans to safeguard the security of staff (e.g. during an emergency or major campaign) as well as security at the central and/or regional storage facilities and for transit of products.
	☐ Adapt supportive supervision tools and develop plans for visits at all levels.
	☐ Conduct one of the published COVID-19 vaccine table-top exercises to test COVID-19 country readiness.

Group	National action plan key activities
2	**Put in place monitoring and evaluation systems**
	☐ Develop or adapt existing surveillance and monitoring frameworks with a set of recommended indicators (coverage, acceptability, disease surveillance, etc.) for COVID-19 vaccine, including gathering information from facilities and contractors participating in vaccine delivery, and ensuring necessary human resource capacity is in place.
	☐ Develop or adapt necessary electronic and/or paper-based monitoring tools and appropriate institutional arrangements (e.g. vaccination cards/certificates, facility-based nominal registers, etc.) to monitor progress and coverage among different at-risk categories and facilitate vaccine delivery and timely reporting.
	☐ Produce and distribute monitoring tools to eligible vaccination providers, develop, test and roll-out any changes to electronic systems, provide training for use of these tools and processes to traditional and new providers.
	Prepare cold chain, logistics and infrastructure
	☐ Update and implement systems and protocols for tracking and monitoring the stock management and distribution of vaccines and key supplies through the Government's existing Vaccine Logistics Management and Information System (VLMIS), including operating procedures to reflect the characteristics of COVID-19 vaccines (i.e. vial size, vaccine vial monitor (VVM), etc.).
	☐ Create a distribution strategy, including mapping the potential port(s) of entry, points of storage (stores) and stocking, and fallback facilities in the country with their respective cold chain storage (2-8C, -20C, -60/70C) and transportation capacity for vaccines and ancillary products, and ensure necessary human resource capacity is in place.
	☐ Map and develop plan to provide for infrastructure needs, including for energy (primary and back-up power, especially in cold chain), information technology/communications (including internet connectivity) and water.
	☐ Plan and procure waste management supplies and equipment for appropriate implementation of waste management protocols.
	Establish or reinforce vaccine safety surveillance systems
	☐ Ensure guidelines, documented procedures and tools for planning and conducting vaccine pharmacovigilance activities (i.e. adverse events following immunization (AEFI) reporting, investigation, causality assessment, risk communication and response), have been developed and disseminated to surveillance facilities/sites.
	☐ Establish the reporting forms and procedures among the EPI and NRA to share safety information and decision making.
	☐ Stimulate and focus passive surveillance on groups and events according to available safety information (consider risk-management plans).
	☐ Plan active surveillance of specific COVID-19 vaccine related adverse events. If this is not possible, develop provisions that allow reliance on active surveillance data, decisions, and information from other countries or regional or international bodies.
	☐ Expedite appropriate representation, well defined terms of reference and training the AEFI committee to review COVID-19 Vaccine safety data (e.g. causality assessment of serious AEFI, clusters of AEFI, emerging safety concerns, etc.).
	☐ Identify provisions that require manufacturers to implement risk-management plans and collect and report COVID-19 vaccine safety data to the NRA.
	☐ Define roles and responsibilities and establish a coordination mechanism between relevant stakeholders (NRA, Expanded Programme on Immunization [EPI], MAH, Ministry of Health, WHO and others) for exchange of COVID-19 vaccine safety information, including relevant data systems and information flow.
	☐ Identify and secure channels of data sharing mechanisms to share COVID-19 vaccine safety data and findings with relevant regional and international partners.

Group	National action plan key activities
2	**Support demand, and engage community**
	☐ Design and distribute a social mobilization and engagement strategy/demand plan and information awareness programme (including advocacy, communications, social mobilization, risk and safety communications, community engagement, and training) to support confidence, acceptance and demand for COVID-19 vaccines, taking into account cultural and historic issues that may influence vaccine hesitancy in various communities.
	☐ Engage healthcare workers as central to vaccine rollout success, with their three roles as vaccine receivers, providers, and influencers of people's vaccine acceptance and uptake.
	☐ Evaluate anti-vaccination perceptions in population, and communicate appropriately to build vaccine acceptance and demand.
	☐ Develop key messages and materials for public communications and advocacy, in alignment with demand plan.
	☐ Address vaccine hesitancy, misinformation and other demand-side issues.
	Policy
	☐ Monitor emerging evidence on vaccine performance, safety, and updates to vaccine recommendations from SAGE, and convene NITAG for updates to vaccine use policies as needed.
3	**Initiate and evaluate vaccine deployment processes**
	☐ Continue data monitoring of vaccine implementation, including coverage by target group, age, gender as well as stock management, safety and social listening.
	☐ Establish and implement post-introduction surveillance, to inform optimization of the vaccine . In addition to disease surveillance this should include reporting of temperature excursions that may occur as well as quality or safety deviations if found.
	☐ For some settings, establish post-implementation vaccine effectiveness and impact assessments to inform policy and optimization. Establish approaches to assess vaccine breakthrough cases as indicators of vaccine effectiveness.
	☐ Update the National Deployment and Vaccination Plan (NDVP) or similar strategy document with input from relevant bodies and in line with WHO guidance and SAGE recommendations, incorporating new information vaccine profiles, etc.
	☐ Conduct post-introduction evaluation (PIE) 6 months following introduction.
	☐ Conduct an Intra-Action Review (IAR) for vaccination during the COVID-19 response for course correction and improvement.

Global and regional support

Support to ongoing national action plans

- [ ] Support countries in the development and improvement of their National Deployment and Vaccination Plans (NDVP) and in the use of the Vaccine Introduction Readiness Assessment Tools (VIRAT/VRAF 2.0) to monitor progress, NDVP preparation, and implementation.
- [ ] WHO will continue to support a key portfolio of trainings, briefs and simulation exercise (available from *OpenWHO*) to help country programmes and health care workers in the preparation for vaccine roll-out.
- [ ] WHO will provide coordination support for all Immunization Partners (UN agencies, CSOs, donors, COVAX partners, etc.) in the global COVID-19 vaccine rollout through planning, convening, and requesting countries to upload funding and technical assistance needs on the COVID-19 Partners Platform.
- [ ] Provide technical assistance during the preparation and review of the NDVPs, and during the deployment of the COVID-19 vaccines.
- [ ] Adaption of the COVID-19 Intra-Action Review (IAR), which was developed to guide countries to conduct periodic reviews of their national and subnational COVID-19 response, to include vaccination and support countries with their reviews.
- [ ] Support the documentation of learning and best practices during national vaccine introductions to share and use to adapt trainings and support.
- [ ] Establish norms, guidance, and protocols for vaccine effectiveness and impact evaluations, and tracking of vaccine breakthrough cases; convene post-implementation evaluation partners and continuously review and interpret the lessons from the results of these evaluations to inform policy decisions. Provide technical and financial support to undertake such evaluations in representative countries/regions.
- [ ] Continue to monitor vaccine implementation through a global dashboard of key indicators of the introduction and monthly data collection by all countries through a COVID-19 vaccine module on the WHO/UNICEF Electronic Joint Reporting Form.
- [ ] Monitor impact of the COVID-19 vaccine roll-out on regular immunization and other health services and advocate and support countries to adapt and maintain essential services.
- [ ] Support countries in preparing for vaccine roll-out through simulation exercise. Vaccine table-top exercises are available to assist countries plan, develop and update their national deployment and vaccination plans.

Support to accelerate equitable access to new COVID-19 tools

- [ ] WHO's Strategic Advisory Group of Experts on Immunization (SAGE) will continue to review all available information on vaccine candidates that have reported phase 3 data.
- [ ] On the basis of these deliberations SAGE will formulate policy recommendations on how these vaccines can be best deployed in different contexts. SAGE will also make recommendations on additional evidence needed to better understand safety, long-term efficacy, disease impact, vaccine dosing, performance against vaccine variants, and impact on transmission to inform optimization of the COVID-19 vaccine and other public health and social measures.

Global and regional support

Research and innovation priorities

- ☐ Support for network of post-introduction operational research on vaccine delivery, acceptance and performance. WHO convenes partners (UNICEF, GAVI, BMGF, CDC, etc.) to support the development or adaptation of digital tools for the COVID-19 vaccine roll-out.
- ☐ WHO will continue to lead normative guidance on research and development, including target product profiles for vaccines, defining animal models and lab assays, core protocols for clinical trials, maintaining a landscape document of all vaccines in development, and convening manufacturers and experts to guide vaccine development.
- ☐ WHO will continue to lead normative guidance and coordination on post-introduction vaccine effectiveness, impact and optimization evaluations to inform vaccine use policies and vaccine development needs
- ☐ Support the Solidarity Vaccine Trial that will be launched in 2021 and holds the promise to ensure that as many of the 200 vaccine candidates still in development have the best chance of success. Its aims are to evaluate efficiently and rapidly (within 3–6 months of each vaccine's introduction into the study) the efficacy of multiple vaccines, helping to ensure that weakly effective vaccines are not deployed.

Relevant guidance documents:

- *Welcome WHO page: ACT-Accelerator partnership;*
- *Welcome WHO page to COVID-19 vaccine country readiness and delivery;*
- *Safety monitoring guidance;*
- *Allocation documents;*
- *Regulatory guidance (EOI for manufacturers and others);*
- *COVID-19 Vaccine introduction readiness assessment tool;*
- *Behavioural considerations for acceptance and uptake of COVID-19 vaccines;*
- *Guidance on developing a national deployment and vaccination plan (NDVP) for COVID-19 vaccines;*
- *COVID-19 vaccine introduction readiness assessment tool;*
- *Guidance on developing a national deployment and vaccination plan for COVID-19 vaccines;*
- *SAGE recommendations*.

ANNEX 1: Acronyms

AAR	After Action Reviews
CHW	Community Health Worker
CMT	Crisis Management Team
COVID-19	Coronavirus Disease of 2019
CPRP	COVID-19 Country Preparedness and Response Plan
CSCS	Interagency Supply Chain Systems
DCP	Disease Commodity Package
EMT	Emergency Medical Team
EOC	Emergency Operations Centre
ERM	Emergency Risk Management
FCV	Fragile, Conflict-Affected and Vulnerable
GHRP	Global Humanitarian Response Plans for COVID-19, released by the Office for the Coordination of Humanitarian Affairs (OCHA)
GISRS	Global Influenza Surveillance and Response System
GOARN	Global Outbreak Alert and Response Network
IAR	Inter-Action Reviews
IASC	Inter-Agency Standing Committee
ICAO	International Civil Aviation Organization
ICT	Information and Communication Technology
IDPs	Internally Displaced People
IFRC	International Federation of Red Cross and Red Crescent Societies
IHR 2005	International Health Regulations
ILI	Influenza-like Illness
IMO	International Maritime Organization
IMST	Incident Management Support Team
Infodemic	Excessive amount of information about a problem, which makes it difficult to identify a solution
IOM	United Nations International Organization for Migration
IMV	Intermittent Mandatory Ventilation
IPC	Infection Prevention and Control (Pillar 6)
IPPP	Influenza Pandemic Preparedness Plan
KPI	Key Performance Indicator
MSF	Médecins Sans Frontières
NGO	Non-Governmental Organization
OCHA	Office for the Coordination of Humanitarian Affairs

OSL	Operation Support and Logistics
PCR	Polymerase Chain Reaction (molecular COVID-19 testing)
PHC	Primary Health Care
PHEIC	Public Health Emergency of International Concern
PHEOC	Public Health Emergency Operations Centre
PHSM	Public Health and Social Measures
PoE	Points of Entry
PPE	Personal Protective Equipment
R&D	Research and Development
RC	United Nations Resident Coordinator
RCCE	Risk Communication and Community Engagement (Pillar 2)
SARI	Severe Acute Respiratory Infection
SOP	Standard Operating Procedures
SPRP	*COVID-19 Strategic preparedness and response plan*, released by the World Health Organization on 3 February 2020
SPRP2	Update to *COVID-19 Strategic preparedness and response plan*, released by the World Health Organization
'Strategy Update'	Strategy Update of the *COVID-19 Strategic preparedness and response plan*, released by the World Health Organization on 14 April 2020
UN	United Nations
UNCT	United Nations Country Team
UNDCO	United Nations Development Coordination Office
UNDP	United Nations Development
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNOPS	United Nations Office for Project Services
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization

ANNEX 2: Technical documents

1 "*Western Pacific Regional Action Plan for Response to Largescale Community Outbreaks of COVID-19*", WHO Western Pacific Region, 2nd April 2020

2 "*Preparing for large-scale community transmission of COVID-19: Guidance for countries and areas in the WHO Western Pacific Region*", WHO Western Pacific Region, 28th February 2020

3 "*2019 Novel Coronavirus (2019-nCoV): Strategic Preparedness and Response Plan*", WHO, Draft as of 3rd February 2020

4 "*WHO COVID-19 Strategy Update*", WHO, 14th April 2020

5 "*COVID-19 Strategic Preparedness and Response Plan Operational Planning Guidelines to Support Country Preparedness and Response*", WHO, 12th February 2020

6 "*WHO 2019 Novel Coronavirus (2019-nCoV) Strategic Preparedness and Response Plan for the South East Asia Region*", WHO South East Asia Region, February 2020

7 "*2019 Novel Coronavirus (2019-nCOV) Emergency Response Plan Template EURO*", WHO European Region, Draft

8 "*Coronavirus disease 2019 (COVID-19) strategic preparedness and response plan: Accelerating readiness in the Eastern Mediterranean Region*", Eastern Mediterranean Region, February 2020

9 "*WHO Interim Guidance Note on Health System Response to COVID-19 in the Context of Internally Displaced Persons, Refugees, Migrants and Returnees in the Eastern Mediterranean Region*", Eastern Mediterranean Region, 7th April 2020

10 "*WHO Interim Guidance Note on Health Systems Response to COVID-19 Outbreak in the Eastern Mediterranean Region*", Eastern Mediterranean Region, April 2020

11 "*Response to COVID-19 Outbreak in the Region of the Americas*", 25th March 2020

12 "*Interim Guidance: Public Health and Social Measures for COVID-19 Preparedness and Response in Low Capacity and Humanitarian Settings*", WHO, Draft as of 23rd April 2020

13 "*Shared responsibility, global solidarity: Responding to the socio-economic impacts of COVID-19*", United Nations, March 2020

14 "*IASC Interim Guidance on Public Health and Social Measures for COVID 19 Preparedness and Response Operations in Low Capacity and Humanitarian Settings*", OCHA, 6th May 2020

15 "*COVID-19 Strategic Preparedness and Response Plan Operational Planning Guidelines to Support Country Preparedness and Response*", WHO, 22nd May 2020

16 "*COVID-19 SPRP Monitoring and Evaluation Framework*", WHO, 5th June 2020

17 "*WHO COVID-19 Preparedness and Response Progress Report - 1 February to 30 June 2020*", WHO, 3rd August 2020

18 "*The Independent Panel 2nd Report on Progress*", Independent Panel for Pandemic Preparedness and Response, January 2021

19 "*Independent Oversight and Advisory Committee for the WHO Health Emergencies – Looking back to move forward*", WHO, 4th November 2020

20 "*Strengthening preparedness for health emergencies: implementation of the International Health Regulations (2005) Interim progress report of the Review Committee on the Functioning of the International Health Regulations (2005) during the COVID-19 Response*", WHO, 12th January 2021

21 "*COVID-19 response*", WHO, 8th January 2021

22 "*Interim position pager: Considerations regarding proof of COVID-19 vaccination for international travelers*", WHO, 5th February 2021

23 "*Critical preparedness, readiness, and response actions for COVID-19*", WHO, 4th November 2020

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