



## Key Messages

Viruses change as they circulate, and these changes can lead to changes in characteristics of the virus. Everyone must continue to take all actions to slow and eventually stop the spread of the virus.

## Highlights and main issues

- As of 18 December, COVAX has agreements in place to access nearly two billion doses of several promising vaccine candidates and laid the groundwork for further doses to be secured through contributions from donors.
- The diagnostics pillar of the ACT-A has announced that price and volume guarantees for over 120 million new high-quality rapid diagnostic tests had been facilitated for low- and middle-income countries.
- New WHO written standards are being developed on “Messenger RNA vaccines: regulatory considerations”.
- The EMA ‘OPEN’ initiative will allow the regulators from Health Canada, Swissmedic, and Japan MHLW/PMDA, and WHO, to participate in the evaluation of applications for COVID-19 medicines and vaccines.
- Updated guidance from WHO makes strong recommendations against the use of hydroxychloroquine and lopinavir/ritonavir in patients with COVID-19, regardless of disease severity.
- A US FDA letter of authorization for Emergency Use Authorization of the Moderna mRNA-1273 vaccine was issued on December 18, 2020. The letter provides information regarding the product, the data that were reviewed, the criteria for issuance of authorization, the scope of the authorization, the conditions of authorization and other information.
- Conditional marketing authorization was granted by the European Commission on 21 December 2020 to the Pfizer/BioNTech COVID-19 vaccine to prevent coronavirus disease 2019 (COVID-19) in people from 16 years of age, on the basis of a recommendation from the European Medicines Agency.
- Reports from the UK and USA of anaphylaxis following the Pfizer/BioNTech COVID-19 vaccine were considered by a subcommittee of the WHO Global Advisory Committee on Vaccine Safety on 23 December.
- To support country and regional safety monitoring, the WHO COVID-19 Vaccine Safety Manual and Training Tools were launched via a global webinar on 15 December.
- WHO publishes “A year without precedent: WHO’s COVID-19 response”.

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## New virus variants

Last week, South African and UK health officials informed WHO and the public about different variants of the virus that causes COVID-19 circulating in their countries. WHO is in close contact with health officials and scientists in the UK and South Africa about changes they have identified in the virus. While both variants have one common change (501Y), the virus variants reported from South Africa and the UK are different and sequence analysis revealed that they originated separately. The UK has reported that this new variant transmits more easily but there is no indication so far that it is more likely to cause severe disease, or have an impact on vaccines.

Viruses change as they circulate, and these changes can lead to changes in characteristics of the virus. Everyone must continue to take all actions to slow and eventually stop the spread of the virus. WHO will continue to inform countries and the public as it learns more.

## Update on the ACT-Accelerator

### COVAX plans for global rollout starting Q1 2021

[COVAX](#), the vaccines pillar of the ACT-Accelerator, is convened by [CEPI](#), [GAVI](#) and [WHO](#), with the ambition of contracting enough volumes to equitably deliver 2 billion doses of safe, effective and quality vaccines by the end of 2021. Candidates to be included in the [COVAX Facility](#) portfolio are being selected from the COVAX R&D portfolio and other clinical candidates.

As of 18 December, COVAX has agreements in place to access nearly two billion doses of several promising vaccine candidates and laid the groundwork for further doses to be secured through contributions from donors. The new deals announced on 18 December include the signing of an advance purchase agreement with AstraZeneca for 170 million doses of the AstraZeneca/Oxford candidate, and a memorandum of understanding (MoU) with Johnson & Johnson for 500 million doses of the Janssen candidate, which is currently being investigated as a single dose vaccine.

These agreements mean that all COVAX's 190 participating and eligible economies will be able to access doses to protect vulnerable groups in the first half of 2021. At least 1.3 billion donor-funded doses will be made available to 92 economies eligible for the Gavi COVAX AMC, targeting up to 20% population coverage by the end of the year. Funding raised in 2020 and early pledges toward 2021 targets, alongside these agreements, offer clearest pathway yet to ending the acute phase of the pandemic globally by the end of 2021.

Joint News Release: [COVAX Announces additional deals to access promising COVID-19 vaccine candidates; plans global rollout starting Q1 2021](#) (18 Dec 2020)

### Principles for sharing COVID-19 vaccine doses with COVAX

Some countries have secured more doses than needed for their populations and now intend to rapidly share a portion of those doses with other countries. Consequently, the Facility is accelerating its work with potential dose-sharing countries, and vaccine manufacturers, to include these doses in the Facility and facilitate their equitable global distribution. These shared doses will complement the early doses procured through the Facility.

To maximize impact, the Facility has published principles for sharing doses. These are that the vaccines must be safe and effective; there should be early availability; the vaccines should be rapidly deployable; they should be unearmarked; and should be available in substantive quantities.

[Principles for sharing COVID-19 vaccine doses with COVAX](#) (18 Dec 2020)

### Therapeutics

A webinar on 18 December explained how WHO and partners are working towards access to COVID-19 therapeutics, including the work carried out by the Access to COVID-19 Tools Accelerator (ACT-A) Therapeutics Pillar, led by UNITAID and the Wellcome Trust. The webinar covered end-to-end issues from the research and development landscape to getting products into countries.

WHO webinar on COVID-19 treatments: [Optimizing evidence and access \(agenda\)](#) (18 Dec 2020)

At the opening of the third ACT Accelerator Facilitation Council on 14 December, Dr Tedros addressed that 2.9 million treatment courses of dexamethasone have been secured for low- and middle-income countries. The Co-chairs, additionally, announced that a treatment allocation team is developing a mechanism to allocate monoclonal antibodies, a promising new treatment. These are not yet recommended for use by WHO, but it is important to be prepared to address potential demand and supply mismatches.

[Dr Tedros' opening speech at the third ACT Accelerator Facilitation Council](#) (14 Dec 2020)

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[Statement of the Co-Chairs of the 3rd ACT Accelerator Facilitation Council](#) (14 Dec 2020)

## **Diagnostics**

The diagnostics pillar is co-convened by FIND and the Global Fund. On 14 December, it was announced that the price and volume guarantees for over 120 million new high-quality rapid diagnostic tests had been facilitated for low- and middle-income countries.

## **Alignment of approaches by regulators**

### **Biological standardization of COVID-19 vaccines, therapeutics and diagnostics**

The 73rd meeting of the WHO Expert Committee on Biological Standardization (ECBS) was held on 9 and 10 December 2020 by video conferencing and focused on addressing a number of urgent biological standardization issues related to COVID-19. The main outcomes are summarized below. A full report of the meeting will be published in the WHO Technical Report Series in 2021.

The ECBS was updated on the progress made in the development of the following new or revised WHO written standards:

- Monoclonal antibodies for the prevention and treatment of infectious diseases: regulatory considerations
- Messenger RNA vaccines: regulatory considerations
- Revision of the WHO Guidelines on evaluation of similar biotherapeutic products (SBPs)

The ECBS established the first WHO International Standard for anti-SARS-CoV-2 immunoglobulin with a unitage of 250 IU/ampoule (neutralizing antibody activity) and intended for use in neutralizing antibody assays. The reference preparation had also been shown to reduce inter-laboratory variation when used in antigen-specific antibody binding assays, thus raising the possibility of its utility in the harmonization of such assays. The ECBS requested that further statistical analysis be conducted to confirm the suitability of the material for this purpose with a view to recommending the assignment of a unitage for antibody binding activity at its next meeting. The ECBS also established the first WHO International Reference panel of anti-SARS-CoV-2 immunoglobulin, with no assigned units.

The first WHO International Standard for SARS-CoV-2 RNA for NAT-based assays was established and assigned a unitage of 7.40 log<sub>10</sub>IU/ampoule. The ECBS also endorsed a proposal to develop a standard for SARS-CoV-2 antigens to support the development, assessment and comparability of antigen-based rapid diagnostic tests.

An executive summary of the meeting will be published in early 2021

## **WPRO Update on COVID-19 regulatory response**

On 7<sup>th</sup> December, the WHO Western Pacific Regional Office (WPRO) held its sixth virtual conference convened with Western Pacific Regional Alliance of National Regulatory Authorities for Medical Products. Updates on the latest status of COVID-19 regulatory response were provided and National Regulatory Authorities shared regulatory issues, challenges and transferable lessons and identified collaborative actions for effective regulatory preparedness and response. Regulatory professionals from Australia, Brunei, Cambodia, China, Hong Kong SAR (China), Japan, Mongolia, New Zealand, Philippines, Republic of Korea, Viet Nam attended the conference. Expedited approval, importation and streamlined lot release of COVID-19 vaccines through reliance and recognition was highlighted in order to meet the public's need to access these vaccines.

In the meeting, the Food and Drug Administration of the Philippines shared an important regulatory preparedness step taken for expedited emergency use authorization.

[Executive order No 121](#) by the President of the Philippines (02 Dec 2020)

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On 14 December, the follow-up guidelines was published which define the emergency-use authorization (EUA) registration process, requirements for applications, fees and decision criteria.

[FDA Circular No. 2020-036: Guidelines on the Issuance of Emergency Use Authorization for Drugs and Vaccines for COVID-19](#) (14 Dec 2020)

## **EMA “OPEN” initiative**

The European Medicines Agency (EMA) Management Board agreed that EMA collaborates with a number of international authorities and the WHO on the evaluation of COVID-19 medicines and vaccines to enrich its scientific discussion. This pilot ‘OPEN’ initiative will allow the regulators Health Canada, Swissmedic, MHLW/PMDA (Japan) and WHO, to participate in the evaluation of applications for COVID-19 medicines and vaccines. These non-EU regulators will join under existing confidentiality arrangements but will not participate in the finalization of the opinion on benefit/risk, nor in the decision on marketing authorization. They will maintain their independence when it comes to taking decisions on whether or not to approve a medicine in their own territories. This initiative is limited to COVID-19 medicines and vaccines and a report on the initiative will be prepared after the pandemic.

[EMA Management Board: highlights of December 2020 meeting](#) (18 Dec 2020)

## **Draft WHO Guidance for comments:**

As previously communicated (22<sup>nd</sup> Regulatory Update), WHO is seeking comments on draft WHO guidance on Good manufacturing practices for investigational pharmaceutical products for clinical trials in humans and Good practices for research and development facilities.

[Draft working document: Good manufacturing practices for investigational products](#)

(for comments by 06 Jan 2021 – [template for comments](#))

[Draft working document: Good practices for research and development facilities](#)

(for comments by 06 Jan 2021 - [template for comments](#))

## **In vitro diagnostics**

### **WHO EUL and listing update**

The WHO Prequalification Unit is assessing products for Emergency Use Listing (EUL) for candidate in vitro diagnostics (IVDs) to detect SARS-CoV-2. The following IVDs are eligible for EUL submission:

- Assays for the detection of SARS-CoV-2 nucleic acid;
- Rapid diagnostic tests and enzyme immunoassays for the detection of IgM/IgG to SARS-CoV-2; and
- Rapid diagnostic tests for the detection of SARS-CoV-2 antigens.

Manufacturers interested in the EUL submission are invited to contact WHO at [diagnostics@who.int](mailto:diagnostics@who.int) and schedule a pre-submission call.

### WHO EUL submissions

Applicants are asked to submit their applications for assessment based on WHO instructions and requirements for [NAT and Ag detection RDTs](#) and [IVDs detecting antibodies to SARS-CoV-2 virus](#).

Manufacturers who are interested in an EUL submission for assays to detect SARS-CoV-2 are

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invited to contact [diagnostics@who.int](mailto:diagnostics@who.int), to arrange a pre-submission meeting/videoconference/phone conversation.

So far, [27 products](#) have been listed as eligible for WHO procurement among 55 expressions of interest for NAT assays, 33 for antibody detection assays and 14 for antigen detection RDTs have been received.

[The status of each EUL application](#) (15 Dec 2020)

## **IVDs listed by National Regulatory Authorities in IMDRF jurisdictions**

To help countries, WHO publishes links to emergency lists, together with contact details, on IVDs authorized for use in the International Medical Device Regulators Forum ([IMDRF](#)) jurisdictions along with other useful information on policies and guidance.

The [most recent update](#) (23 Nov 2020)

**Note: WHO does not endorse any of the lists provided by NRAs. The information is provided exclusively to assist stakeholders with identifying the links to the various lists.**

## **Therapeutics**

### **New recommendations against use of hydroxychloroquine and lopinavir/ritonavir**

Updated guidance from WHO includes new information and recommendations on hydroxychloroquine and lopinavir/ritonavir for clinicians and health care decision-makers, more specifically a strong recommendation against the use of hydroxychloroquine and lopinavir/ritonavir in patients with COVID-19, regardless of disease severity. The recommendation on hydroxychloroquine was informed by results from a systematic review and network meta-analysis (NMA) that pooled data from 30 trials with 10'921 participants with COVID-19. The recommendation on Lopinavir/ritonavir was informed by the same analysis that pooled data from 7 trials with 7'429 participants. The trials for both drugs included inpatients and outpatients.

The resulting GRADE evidence summary suggested that hydroxychloroquine probably does not reduce mortality (odds ratio 1.11, 95% confidence interval: [CI] 0.95–1.31; absolute effect estimate 10 more deaths per 1000 patients, 95% CI: from 5 fewer – 28 more deaths per 1000 patients; moderate certainty evidence) or need for mechanical ventilation. Lopinavir/ritonavir also probably does not reduce mortality (odds ratio 1.00, 95% CI: 0.82–1.20; absolute effect estimate 0 fewer deaths per 1000 patients, 95% CI: from 17 fewer – 19 more deaths per 1000 patients; moderate certainty evidence) or need for mechanical ventilation. There was no indication of a credible subgroup effect for either intervention based on disease severity or age, and no credible subgroup effect by dose for hydroxychloroquine.

[Therapeutics and COVID-19: living guideline](#) (17 Dec 2020)

### **Research mapping of candidate therapeutics**

A living research mapping of candidate COVID-19 therapeutics, displaying studies per country, showing study design, disease severity in study participants, and type of treatment being studied, as well as network maps of these studies, has been made available at: <https://www.covid-nma.com/dataviz/>

### **Living synthesis of Covid-19 study results**

A list of treatment comparisons, a summary of the evidence for that comparison, and a detailed description of primary studies, including a risk of bias assessment is at: [https://covid-nma.com/living\\_data/index.php](https://covid-nma.com/living_data/index.php)

## Vaccines

### **Moderna mRNA COVID-19 vaccine**

A US FDA letter of authorization for Emergency Use Authorization of the Moderna mRNA-1273 vaccine was issued on December 18, 2020. The letter provides information regarding the product, the data that were reviewed, the criteria for issuance of authorization, the scope of the authorization, the conditions of authorization and other information.

Prior to a 17 December 2020 meeting of the Vaccines and Related Biological Products Advisory Committee (VRBPAC) Meeting, the US FDA released a briefing document outlining the efficacy and safety data on the Moderna mRNA COVID-19 vaccines that was considered by the Committee. The mRNA-1273 vaccine is based on the SARS-CoV-2 spike glycoprotein (S) antigen encoded by RNA and formulated in lipid nanoparticles (LNPs). The proposed use under an Emergency Use Authorization is for active immunization for the prevention of COVID-19 caused by SARS-CoV-2 in individuals 18 years of age and older. The dosing regimen is 2 doses, 100 µg each, administered 1 month apart.

Efficacy data from the final scheduled analysis of the primary efficacy endpoint (data cut-off of November 21, 2020, with a median follow-up of >2 months post-dose 2) demonstrated a Vaccine Efficacy (VE) of 94.1% (95% CI 89.3%, 96.8%), with 11 COVID-19 cases in the vaccine group and 185 COVID-19 cases in the placebo group. The VE in the final analysis when stratified by age group was 95.6% (95% CI: 90.6%, 97.9%) for participants 18 to <65 years of age and 86.4% (95% CI: 61.4%, 95.5%) for participants ≥65 years of age. A final secondary efficacy analysis also supported efficacy against protocol-defined severe COVID-19, with 30 cases in the placebo group vs. 0 cases in the vaccine group.

Safety data from a November 11, 2020 interim analysis of approximately 30,350 participants ≥18 years of age randomized 1:1 to vaccine or placebo with a median of 7 weeks of follow-up after the second dose supported a favorable safety profile, with no specific safety concerns identified. On December 7, 2020, the Sponsor submitted additional follow-up data from these participants with a cut-off of November 25, 2020, which represents a median of 9 weeks (>2 months) of follow-up post-dose 2. Key safety data from this later submission, including death, other serious adverse events, and unsolicited adverse events of interest were independently verified and confirmed not to change the safety conclusions from the interim safety analysis.

The most common solicited adverse reactions associated with mRNA-1273 were injection site pain (91.6%), fatigue (68.5%), headache (63.0%), muscle pain (59.6%), joint pain (44.8%), and chills (43.4%); severe adverse reactions occurred in 0.2% to 9.7% of participants, were more frequent after dose 2 than after dose 1 and were generally less frequent in participants ≥65 years of age as compared to younger participants. Among unsolicited adverse events of clinical interest, which could be possibly related to vaccine, using the November 25, 2020 data cutoff, lymphadenopathy was reported as an unsolicited event in 173 participants (1.1%) in the vaccine group and 95 participants (0.63%) in the placebo group. Lymphadenopathy (axillary swelling and tenderness of the vaccination arm) was a solicited adverse reaction observed after any dose in 21.4% of vaccine recipients <65 years of age and in 12.4% of vaccine recipients ≥65 years of age, as compared with 7.5% and 5.8% of placebo recipients in those age groups, respectively. There was a numerical imbalance in hypersensitivity adverse events across study groups, with 1.5% of vaccine recipients and 1.1% of placebo recipients reporting such events in the safety population.

There were no anaphylactic or severe hypersensitivity reactions with close temporal relation to the vaccine. Throughout the safety follow-up period to date, there were three reports of facial paralysis (Bell's palsy) in the vaccine group and one in the placebo group. Currently available information is insufficient to determine a causal relationship with the vaccine. There were no other notable patterns or numerical imbalances between treatment groups for specific categories of adverse events (including other neurologic, neuro-inflammatory, and thrombotic events) that would suggest a causal relationship to mRNA-1273.

With the exception of more frequent, generally mild to moderate reactogenicity in participants <65 years of age, the safety profile of mRNA-1273 was generally similar across age groups, genders,

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ethnic and racial groups, participants with or without medical comorbidities, and participants with or without evidence of prior SARS-CoV-2 infection at enrolment.

The VRBPAC meeting discussed and provided recommendations that, based on the totality of scientific evidence available, the benefits of the mRNA-1273 COVID-19 Vaccine outweighed its risks for use in individuals 18 years of age and older. The committee also discussed what additional studies should be conducted by the vaccine manufacturer following issuance of the EUA to gather further data on the safety and effectiveness of this vaccine.

[VRBPAC meeting materials](#) (17 Dec 2020)

[FDA letter of authorization for EUA of the Moderna vaccine for COVID-19](#) (18 Dec 2020)

[FDA Fact sheet for healthcare providers administering vaccine](#)

[FDA Fact sheet for recipients and caregivers](#)

## **Pfizer/BioNTech COVID-19 vaccine**

The UK MHRA has published its Public Assessment Report for the Pfizer/BioNTech vaccine.

[Public Assessment Report Authorisation for Temporary Supply COVID-19 mRNA Vaccine BNT162b2 \(BNT162b2 RNA\) concentrate for solution for injection](#) (15 Dec 2020)

Conditional marketing authorization was granted by the European Commission on 21 December 2020 to the Pfizer/BioNTech COVID-19 vaccine to prevent coronavirus disease 2019 (COVID-19) in people from 16 years of age, on the basis of a recommendation from the European Medicines Agency. The EMA's human medicines committee (CHMP) had completed its rigorous evaluation of the vaccine, concluding by consensus that sufficiently robust data on the quality, safety and efficacy of the vaccine are now available to recommend a formal conditional marketing authorization. This will provide a controlled and robust framework to underpin EU-wide vaccination campaigns. The product information approved by the CHMP contains prescribing information for healthcare professionals, a package leaflet for members of the public and details of conditions of the vaccine's authorization.

An assessment report, with details of EMA's evaluation of the vaccine, and the full risk management plan will be published within days. Clinical trial data submitted by the company in the application for marketing authorisation will be published on the Agency's Clinical data website in due course. More information is available in an overview of the vaccine in lay language, including a description of the vaccine's benefits and risks and why EMA recommended its authorisation in the EU.

[EMA recommends first COVID-19 vaccine for authorisation in the EU](#) (21 Dec 2020)

[Pharmacovigilance Plan of the EU Regulatory Network for COVID-19 Vaccines](#)

[EMA Safety monitoring plan and guidance on risk management planning for COVID-19 vaccines](#)

## **Ultra-low temperature freezers**

WHO specifications for ultra-low temperature freezers, power requirements and transport cold boxes will be published in December 2020.

## **0.3 ml Autodisable syringes**

WHO Prequalification Team received applications on 15 December and is planning to prequalify by the end of December 2020.

## **Updates from the Global Advisory Committee on Vaccine Safety**

In the area of WHO safety review and signal detection, a GACVS sub-committee has been established to specifically look into the safety aspects of COVID-19 vaccines and held its first meeting on 23 December 2020. Reports from the UK and USA of anaphylaxis following the Pfizer/BioNTech mRNA vaccine were considered. Feedback from the sub-committee will be used to inform the WHO SAGE in their deliberations on this vaccine.

To facilitate coordinated safety information exchange, biweekly meetings on pharmacovigilance between WHO and the EMA have been established, with the first meeting held on 18 December.

The ICMRA pharmacovigilance working group has also initiated bi-weekly meetings. From Friday 18 December the US CBER and CDC are submitting weekly safety reports into the WHO VigiBase.

To support country and regional safety monitoring, the WHO COVID-19 Vaccine Safety Manual and Training Tools were launched via a global webinar on 15 December.

[Temporary site: the WHO global webinar materials](#)

The African Advisory Committee on Vaccine Safety was launched in December 2020. Adverse Events of Special Interest Study protocol outlines were endorsed by GACVS in December, with full protocols expected to be available by mid-January 2021.

GACVS guidance on safety in pregnancy of COVID vaccines is expected in quarter 1 2021.

## **Evidence framework for recommendations on use of COVID-19 vaccines**

As emergency use listed/authorized COVID-19 vaccines become available, specific recommendations for the use of these vaccines will need to be issued. The WHO SAGE has published an evidence framework that is intended to offer guidance for considering data emerging from clinical trials in support of issuing vaccine-specific evidence-based recommendations. This information is valuable to countries and regions developing COVID-19 vaccination recommendations.

[Evidence to recommendations for COVID-19 vaccines: Evidence framework](#) (10 Dec 2020)

## **Living mapping and living systematic review of COVID-19 studies**

Living mapping and living systematic reviews are available based on daily searches of the literature for candidate vaccines against COVID-19.

The tool allows vaccine comparisons where data are available as well as a table with the general characteristics of each trial. For each vaccine comparison, forest plots for all the outcomes of interest are available as well as the Summary of Findings table.

The mapping tool is available at: <https://covid-nma.com/vaccines/mapping/>

## **Landscape of candidate vaccines for SARS-CoV-2**

A landscape analysis of candidate SARS-CoV-2 vaccines is regularly published by WHO. Currently, over 200 vaccines are at some stage of development. Of these, **52 vaccine candidates are in human trial**. About 13 are in or entering phase III trials. There are several others currently in phase I/II, which will enter phase III in the coming 2 months. This is a very robust pipeline – the more candidates, the more opportunities for success (typically success rate of candidate vaccines is 10%).

The candidate vaccines are of various types – virus vaccines using live attenuated virus, viral vector vaccines, protein-based vaccines, and nucleic acid or RNA and DNA vaccines, which are completely new platforms.

A landscape analysis of candidate SARS-CoV-2 vaccines is regularly published by WHO.

[Landscape of COVID-19 candidate vaccines](#) (08 Dec 2020)

## Research protocols, assays and reference standards

### WHO Working Group: Animal Models

The immunogenicity in young adult and aged rhesus macaques of a 1 and 2 dose regimen of a candidate vaccine, an Ad26-vector expressing the S protein, was reported in the 17 December meeting. Binding and neutralizing antibodies were demonstrated in both younger and older animals after the first dose, and the antibody responses were boosted by the second dose. A Th1-biased cellular immune response was demonstrated. An experimental preparation of the S protein adjuvanted to alum induced a different profile of binding and neutralizing antibodies compared to the Ad26-vectored vaccine candidate.

Transmission studies in the golden Syrian hamster model showed that the route of transmission influenced severity of SARS CoV-2 infection. Aerosol transmission caused weight loss comparable to intranasal (i.n.) inoculation of the virus, whereas fomite transmission was associated with less severe disease. Virus titres were higher after aerosol transmission than i.n. inoculation. However, the cumulative amount of virus shed over the course of the infection was less after aerosol transmission compared to either i.n. inoculation or fomite transmission.

The 17 December meeting also that broadly-reactive neutralizing antibodies had been prepared from a survivor of the 2003 SARS outbreak. A blood sample from the survivor yielded, after single cell-sorting, 200 antibodies that showed binding to both SARS CoV-1 and SARS CoV-2. Of these, 7 were found to have cross-neutralizing activity, and 3 were selected for affinity maturation using yeast library technology. This resulted in between 100x to 1000x increase in affinity, and 1 of these antibodies, termed ADG-2, with cross-neutralising activity, was selected for study in animal models. Data from two different mouse models showed that ADG-2 provided complete protection against SARS CoV-2 disease in these models.

An extraordinary meeting of the group on 22 December shared very preliminary information available on the emergent SARS COV-lineage in the UK and the different variants in South Africa, and discussed plans for *in vitro* and *in vivo* studies of the viruses.

## Substandard and falsified products

### Request for vigilance and reporting by national regulatory authorities

Regulatory authorities should continue to be vigilant for Substandard and Falsified (SF) versions of Covid-19 related therapies, vaccines and in vitro diagnostics and must report these to the WHO Global Surveillance and Monitoring System : [rapidalert@who.int](mailto:rapidalert@who.int).

It is essential to report such products early on, regardless if they are only suspected or fully confirmed. National focal points from regulatory authorities are encouraged to use their dedicated portal (updated access is being given to all regions) to verify any pre-existing records of substandard / falsified medical products: [WHO Secure Portal](#)

## Medical Devices

### Impact of the African Medical Devices Forum support to African NRAs

The African Medical Devices Forum (AMDF), with the support from the joint secretariat i.e., WHO and AUDA NEPAD, continued with developing lists of COVID-19 diagnostic tests and medical devices including PPE which have been listed by WHO EUL and other Regulatory Authorities as a way facilitating access to this important information by the NRAs in Africa. The fifth update that was endorsed by the African Medicines Regulatory Harmonization Steering Committee and issued in October 2020 included an additional 99 COVID-19 NAT assays and 2 COVID-19 Antigen assays as listed by WHO PQ, South African Health Products Regulatory Authority (SAHPRA), Japan Ministry of Health, USFDA, Health Canada, TGA Australia and Health Sciences Authority, Singapore.

A recent AMDF survey, conducted between September and November 2020, indicated satisfactory

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access and utilization of the developed lists. According to the survey responses, 15 NRAs (71%) were aware of the list of assays and devices developed by AMDF. Eleven (52 %) NRAs confirmed utilization of list of assays, medical devices and PPEs to support regulatory decisions such as listing, procurement decisions and import authorization. All 21 NRAs (100%) were aware of the AMDF Donation Guideline, 42.85% (9) and 52% (11) are aware of the AMDF SF medical devices reporting form and SOP for reporting SF medical devices respectively. Thirteen NRAs (62%) reported to be satisfied with the existing communication and dissemination mechanisms for the documents through emails, MedNet and AUDA-NEPAD website.

AMDF will continue to develop the lists and is currently finalizing development of a Guideline on requirements for issuance of marketing authorization of medical devices including in vitro diagnostics. The guideline includes a section on considerations for issuance of market authorization during health emergencies.

### **Updated guidance on mask use**

WHO has published updated guidance on mask use in health care and community settings, and during home care for COVID-19 cases. It is intended for policy makers, public health and infection prevention and control professionals, health care managers and health workers. The Annex provides advice on how to manufacture non-medical masks. It is intended for those making non-medical masks at home and for mask manufacturers.

[Mask use in the context of COVID-19](#) (01 Dec 2020)

### **A year without precedent: WHO's COVID-19 response**

The COVID-19 pandemic has challenged us as in so many ways, but 2020 saw the world unit against the virus, from small personal gestures to protect others, to international unprecedented collaboration on research and innovation. Science, solutions and solidarity have been WHO's tools for addressing the biggest health threat of the past century.

[A year without precedent: WHO's COVID-19 response](#) (23 Dec 2020)

We are grateful to have connected and worked with you all this year.  
Wishing you and your family a safe, healthy, socially distanced but joyful holiday season and look forward to further collaboration in 2021.

WHO Team