Looking back at a year that changed the world

WHO’s RESPONSE TO COVID-19

World Health Organization
Looking back at a year that changed the world

WHO’S RESPONSE TO COVID-19
Mauritius responded to the COVID-19 pandemic by imposing a countrywide lockdown, combined with WHO guidance to increase testing, contact tracing, surveillance, and clinical care. Pictured here, RNA samples extracted from throat swabs are tested at the Candos Virology Lab.
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The COVID-19 pandemic is the greatest crisis of our time, claiming more than 2 million lives and causing the biggest shock to the global economy since World War II. The social and economic restrictions that have been implemented in many countries to control the virus have exposed and exacerbated inequalities. Progress towards the Sustainable Development Goals has stalled, and in some cases may have reversed. Up to 100 million people have slipped into extreme poverty, the first rise in global poverty in more than two decades. Despite all these challenges, there are reasons for hope. We must guard against complacency; but we should also look ahead with a renewed sense of optimism.

The first reason for hope is simple: we know what works to control the virus. In February 2020, WHO's Strategic preparedness and response plan set out the essential pillars of the response that were required to reduce transmission of the virus, save lives, and protect the vulnerable. Since then, WHO has scaled up and adapted its emergency platforms, and supported countries to implement national COVID-19 plans. Through WHO’s 157 global, regional, and national offices, we have supported countries to adapt to every context, and through our planning and operational support platforms we have ensured that our guidance can be translated into action.

In under 12 months we have shipped more than 250 million items of personal protective equipment around the world; strengthened hundreds of national and subnational laboratories with technical support and the supply of more than 250 million COVID-19 tests; coordinated the deployment of more than 180 teams and missions to strengthen critical response functions at national and subnational level; delivered vital medical supplies including oxygen, and supported more than 12 000 intensive care beds in health systems that might otherwise have been overwhelmed. Countries have shown that when they have a robust system for testing, isolating, and treating cases, and tracing and quarantining contacts, we can get ahead of the virus and control transmission. We have seen that when health systems are prepared, when health workers are protected and trained, and when they have access to the knowledge and treatments they need, we can save lives. And we have shown that even in the most difficult situations we can protect the vulnerable, and deliver essential care.

The second reason for hope is the arrival of new medical countermeasures. WHO’s R&D Blueprint for research during emergencies provided the platform to launch what, in under a year, has become a global biomedical research effort with no parallel in history. Those efforts are now bearing fruit. The emergency use listing of a safe and effective vaccine against COVID-19 is a moment of huge significance, and one we should all take encouragement from. New rapid diagnostic tests have been approved, and progress has been made in the search for effective therapies. But the hard work is far from over.

The urgency and commitment with which the scientific community rose to the challenge of developing vaccines, diagnostics and therapeutics must now be matched by the common purpose with which we in the global community ensure that these new technologies are distributed fairly. To that end, WHO and partners* established the Access to COVID-19 Tools Accelerator (ACT-Accelerator) in April 2020. Together with Gavi and the Coalition for Epidemic Preparedness Innovations, WHO co-leads COVAX, the vaccines pillar of the ACT-Accelerator, which aims to ensure that no countries are left behind in the rush to roll out vaccines.

* ACT-Accelerator partners include: The Bill & Melinda Gates Foundation; the Coalition for Epidemic Preparedness Innovations; FIND; Gavi, the Vaccine Alliance; the Global Fund to Fight AIDS, Tuberculosis and Malaria; Unicef; Unitaid; the Wellcome Trust; the World Bank Group; the International Federation of Pharmaceutical Manufacturers and Associations; and the Developing Countries Vaccine Manufacturers Network.
Unless COVAX is fully funded and utilized we risk repeating the moral and market failures that plagued the early stages of the global response to COVID-19, with the hoarding and misallocation of a vital public health resource. An uncoordinated, me-first approach to vaccination not only condemns the world’s poorest and most vulnerable to unnecessary risk, it is strategically and economically self-defeating. Solidarity and equity are our routes out of the pandemic and to global prosperity. The pursuit of short term and narrow self-interest is the road to prolonging the pandemic, the restrictions needed to contain it, and human and economic suffering.

The work we must undertake together to ensure that every country is prepared to receive and distribute vaccines equitably and effectively will be one of the greatest challenges of the pandemic. WHO is already working closely with countries and partners to support the development and implementation of national deployment and vaccination plans for COVID-19 vaccines, to ensure countries are able and ready to access vaccines through the COVAX facility.

The third reason for hope is that there is now a once-in-a-generation chance to harness political will to forge a new global compact on health security, and to translate the efforts to control COVID-19 around the world into a legacy of lasting change.

There is now a once in a generation chance to harness the political will to forge a new global compact on health security, and to translate the efforts to control COVID-19 around the world into a legacy of lasting change.

Dr Tedros Adhanom Ghebreyesus
WHO Director-General
2020: RESPONSE IN NUMBERS

Global overview of deployed resources

- **23** United Nations (UN) entities participating in UN Crisis Management Team
- **509** COVID-19 related publications (technical documents)
- **191** Internationally deployed Emergency Medical Teams (EMTs) and GOARN deployments
- **243 million** PPE shipped, including masks, face shields, gloves, gowns and goggles
- **156** WHO offices have implemented an Incident Support Team
- **150** COVID-19 online trainings available on OpenWHO
- **19.7 million** Respirator masks shipped
- **140** Countries, territories and areas on Partners Platform
- **19 million** Tests shipped
- **12,000** Intensive care unit beds provided by WHO through surge mechanisms
- **19.7 million** Countries, territories and areas implementing sero-epidemiological investigations or studies
- **12,000** Intensive care unit beds provided by WHO through surge mechanisms

88.2%

- US$ 1.5 billion raised
- US$ 1.7 billion requested

*Data as of 31 December 2020*
Overview of COVID-19 SPRP monitoring and evaluation

Proportion of countries with a COVID-19 preparedness and response plan (target: 100%)

<table>
<thead>
<tr>
<th>At 1 March</th>
<th>At 30 June</th>
<th>At 31 December</th>
</tr>
</thead>
<tbody>
<tr>
<td>46%</td>
<td>83%</td>
<td>91%</td>
</tr>
</tbody>
</table>

A plan explains the strategy to prepare and respond across all sectors of government and society. Evidence of a plan can include a framework of response for national and subnational authorities. WHO provides operational planning guidelines to support country preparedness and response.

Proportion of countries with a functional COVID-19 coordination mechanism (target: 100%)

<table>
<thead>
<tr>
<th>At 1 March</th>
<th>At 30 June</th>
<th>At 31 December</th>
</tr>
</thead>
<tbody>
<tr>
<td>45%</td>
<td>92%</td>
<td>97%</td>
</tr>
</tbody>
</table>

Functional in this context means that the mechanism has the key components outlined in the Framework for a Public Health Emergency Operations Centre, including plans/procedures, physical infrastructure, information systems and standards, and human resources.

Proportion of countries that have a COVID-19 community engagement plan (target: 100%)

<table>
<thead>
<tr>
<th>At 1 March</th>
<th>At 30 June</th>
<th>At 31 December</th>
</tr>
</thead>
<tbody>
<tr>
<td>19%</td>
<td>85%</td>
<td>97%</td>
</tr>
</tbody>
</table>

A community engagement plan should include at least four of the six recommended actions outlined in the SPRP.

Proportion of countries that have access to laboratory testing capacity (target: 100%)

<table>
<thead>
<tr>
<th>At 1 March</th>
<th>At 30 June</th>
<th>At 31 December</th>
</tr>
</thead>
<tbody>
<tr>
<td>85%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory testing capacity is defined as either in-country laboratory testing capacity, or access to international laboratories that can provide results within 72 hours.

Proportion of countries that have a COVID-19 clinical referral system (target: 100%)

<table>
<thead>
<tr>
<th>At 1 March</th>
<th>At 30 June</th>
<th>At 31 December</th>
</tr>
</thead>
<tbody>
<tr>
<td>37%</td>
<td>75%</td>
<td>89%</td>
</tr>
</tbody>
</table>

A clinical referral system should outline how patients need to be managed and streamlined by the health care system (e.g. first points of contact for individuals, fever clinics, designated referral facilities, hotlines etc. as relevant in the national context).
Essential supplies by region

**African region**
- Sample collection kits: 2,833,835
- Tests (manual PCR): 1,431,634
- Face shields: 1,417,810
- Gloves: 8,216,521
- Goggles: 165,810
- Gowns: 1,535,679
- Medical masks: 53,077,950
- Respirators: 2,595,630

**Region of the Americas**
- Sample collection kits: 1,019,862
- Tests (manual PCR): 10,504,038
- Face shields: 3,333,200
- Gloves: 4,696,000
- Goggles: 322,940
- Gowns: 1,613,020
- Medical masks: 55,136,330
- Respirators: 7,669,760

**Eastern Mediterranean region**
- Sample collection kits: 663,160
- Tests (manual PCR): 1,133,720
- Face shields: 864,985
- Gloves: 5,613,000
- Goggles: 173,520
- Gowns: 759,322
- Medical masks: 26,267,550
- Respirators: 1,350,095

**European region**
- Sample collection kits: 210,650
- Tests (manual PCR): 451,270
- Face shields: 715,300
- Gloves: 8,463,100
- Goggles: 386,380
- Gowns: 1,349,048
- Medical masks: 39,215,500
- Respirators: 5,299,150

**South-East Asia region**
- Sample collection kits: 2,271,550
- Tests (manual PCR): 1,936,700
- Face shields: 3,711,836
- Gloves: 2,125,500
- Goggles: 86,510
- Gowns: 556,000
- Medical masks: 6,940,500
- Respirators: 604,495

**Western Pacific region**
- Sample collection kits: 114,300
- Tests (manual PCR): 252,064
- Face shields: 761,700
- Gloves: 1,770,000
- Goggles: 310,807
- Gowns: 427,210
- Medical masks: 13,798,150
- Respirators: 2,061,035

*8 January 2021
Looking back at a year that changed the world: **WHO’s response to COVID-19**
Looking back at a year that changed the world: WHO’s response to COVID-19

About this document

2020 has been an extremely challenging year for the world, and for the World Health Organization (WHO). In this report we look back at how the whole Organization has risen to that challenge. Since 2016, when WHO established the Organization’s Health Emergencies Programme, WHO has worked with partners and donors to establish and strengthen the key platforms needed to support countries to prepare for and respond to health emergencies. In 2020 these platforms provided WHO with the foundation from which to launch and coordinate the largest global public health response and the most rapid, most complex biomedical research and development effort in history. As the pandemic has grown and evolved to touch almost every aspect of global health and wellbeing, so WHO’s response has evolved to bring every facet of the Organization’s strength and expertise to bear on COVID-19.

It is important to emphasize that this report reflects on WHO’s role at the centre of a global response that has unfolded on a scale that dwarfs any single organization – even one with a footprint of 150 dedicated country offices around the world. WHO is proud of the role we have played in supporting national authorities to control COVID-19 transmission, protect the vulnerable, and save lives, but wherever and whenever there have been accomplishments they belong to us all. First and foremost they belong to all of the communities around the world that have been affected by COVID-19, and that have taken collective and individual action to stop the spread of the virus. They belong to the health workers who have sacrificed so much to be our first line of defense against the virus, and to keep essential health services running. They belong to the politicians and leaders who have shown the will to tackle COVID-19, and who have given their populations the tools and knowledge they need to protect themselves, with WHO’s support whenever and wherever it has been requested. They belong to the many partner organizations that have worked with WHO to support every aspect of the response. And they belong to every individual and every organization that has contributed financially, materially, and through their actions to support WHO’s work over the past 12 months. All contributions are absolutely vital, but the flexible donations WHO has received from many generous donors are especially valuable, as they have enabled the Organization to rapidly adapt its support as the pandemic has placed dynamic stresses on different health systems and supply chains over the past 12 months.

INTRODUCTION

This first part of the report sets out a brief history of the COVID-19 pandemic so far, including some of the key milestones in WHO’s early response, and describes the Strategic preparedness and response plan (SPRP) that WHO and partners developed and updated to guide the world’s response to COVID-19 at the global, regional, national, and community level. In part two, we explore how WHO has worked at the global, regional, and national level to support countries to first adapt the SPRP to their own contexts, and then to deliver their own national COVID-19 action plans. Part three details the depth and breadth of WHO’s efforts to coordinate and accelerate research and innovation efforts for high-priority medical and non-medical countermeasures that are accessible to all. The final, fourth part of the report looks at some of the lessons that WHO has taken from the past 12 months, and looks ahead to the challenges of 2021, as every pillar of the response adapts to the urgent need to prepare and strengthen health systems in advance of the new vaccines, diagnostics, and other technologies that will add to our growing list of countermeasures against COVID-19.
Epidemiological overview: January to December 2020

The first signal hinting at the emergence of COVID-19 was detected on the final day of 2019 (Figure 1). On 31 December, WHO’s Country Office in the People’s Republic of China picked up a media statement by the Wuhan Municipal Health Commission that referred to a cluster of cases of viral pneumonia. The WHO Country Office immediately notified the International Health Regulations focal point in the WHO Western Pacific Regional Office, and within 24 hours WHO had activated its Incident Management Support Team (IMST) across the three levels of the Organization. On 5 January 2020 WHO alerted all Member States to the cluster through the International Health Regulations Event Information System, and several days later reported that the cluster had been caused by the novel coronavirus that we now know as COVID-19.

Figure 1 The first 30 days: timeline of WHO’s early response

1 Jan | WHO requested information on the reported cluster of atypical pneumonia cases, and activated its Incident Management Support Team (IMST), as part of its emergency response framework, which ensures coordination of activities and response across the three levels of WHO (Headquarters, Regional, Country) for public health emergencies.

3 Jan | WHO’s Country Office in the People’s Republic of China picked up a media statement from the Wuhan Municipal Health Commission about the cluster of cases of “pneumonia of unknown cause”.

2 Jan | After receiving further information from Chinese officials about the cluster of cases of “viral pneumonia of unknown cause”, WHO informed Global Outbreak Alert and Response Network (GOARN) partners in readiness for response. GOARN partners include major public health agencies, laboratories, sister UN agencies, international organizations and NGOs.

5 Jan | WHO shared detailed information about the cluster of cases through the IHR (2005) Event Information System, accessible to all Member States, and published a Disease Outbreak News article on the cluster, accessible by the public.

9 Jan | WHO received confirmation that the cluster of cases was caused by a new coronavirus. Over the next few days WHO convened expert networks in all key response areas, and activated the R&D Blueprint and Global Coordination Mechanism for Research and Development to prevent and respond to epidemics.

13 Jan | WHO publishes first protocol for a RT-PCR assay by a WHO partner laboratory to diagnose the novel coronavirus.

10 Jan | Over a period of three days WHO publishes a comprehensive package of guidance documents for countries, covering topics related to the management of an outbreak of a new respiratory new disease.

20-21 Jan | WHO conducted the first mission to Wuhan and met with public health officials to learn about the response to the cluster of cases of novel coronavirus.

22-23 Jan | The WHO Director-General convened an IHR Emergency Committee to advise on whether the outbreak of a new coronavirus constituted a public health emergency of international concern (PHEIC). Based on the limited data available the committee was unable to declare a PHEIC but recommended it be reconvened within 10 days when more information was available.

24 Jan | WHO held an informal consultation on the prioritization of candidate therapeutic agents for use in novel coronavirus infection.

30 Jan | The WHO Director-General declared the novel coronavirus outbreak a public health emergency of international concern (PHEIC). WHO’s highest level of alarm, after reconvening the IHR Emergency Committee. At that time there were 98 reported cases and no reported deaths in 18 countries outside China.
As the virus spread rapidly, lives and livelihoods around the world began to change. In just 3 months almost 1 million cases had been reported from every one of WHO’s regions (figure 2). By the end of 2020 only a very small handful of countries had yet to report a case of COVID-19. But although the disease has affected every region and almost every country over the past 12 months, there have been significant variations in the extent and intensity of transmission not only between regions, but also between countries within regions, and between subnational areas within countries (figure 3).

Those countries that have been able to reduce transmission and bring outbreaks under control have been able to minimize mortality from COVID-19.

By contrast, in countries that have been unable to control community transmission, outbreaks have grown exponentially. In most countries that have experienced uncontrolled transmission, the rapid increase in patients seeking hospital care has forced authorities to introduce widespread population-level physical distancing measures and movement restrictions in order to slow spread and buy time to set in place other control measures. These distancing measures and movement restrictions, can break chains of COVID-19 transmission by limiting contact between people. However, these measures can also have a negative impact on individuals, communities, and societies by placing severe restrictions on social and economic life. Such measures disproportionately affect disadvantaged groups, including people in poverty, migrants, internally displaced people and refugees, who most often live in overcrowded and under resourced settings, and depend on daily labour for subsistence.

At the regional level, Europe and the Americas together account for approximately 70% of all reported cases and deaths during 2020. South-East Asia and the Eastern Mediterranean account for the 18% and 7% of cases, respectively, although the Eastern Mediterranean accounts for a greater proportion of deaths. Africa and the Western Pacific account for 2% and 1%, respectively, of global cases and deaths.

**Figure 2** Weekly cases of COVID-19 by WHO Region as at 21 January 2021

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Looking back at a year that changed the world: **WHO’s response to COVID-19**
Despite some improvements in treatment COVID-19 remains a severe disease, with most estimates putting the case fatality ratio greater than 10% in people over 65 years of age. Countries with older populations – primarily high-income countries – have fared worst, as the risk of death from COVID-19 rises steeply with age and the burden of non-communicable diseases. There is also evidence that the virus has differential impacts on women and men. Men appear to be more biologically susceptible to severe infection and death. By contrast, in many countries women are at an increased risk of exposure to COVID-19 through the provision of care (women account for approximately 70% of the global health workforce), and are often disproportionately affected by the social and economic implications of response measures.

These impacts include but are not limited to a loss of sexual and reproductive health services, and a steep rise in the incidence of gender-based violence, with UN Women estimating national increases of more than 60% in reports of gender-based violence coinciding with lockdowns. These periods of peak demand for social protection and refuge services coincide with periods that these services have been significantly curtailed due to COVID-19.

**Figure 3** Cumulative geographical distribution of COVID-19 cases as at 21 January 2021

Source: World Health Organization
WHO’s Strategic preparedness and response plan

WHO’s Strategic preparedness and response plan (SPRP) was published on 4 February, four days after the declaration of a global public health emergency on 30 January. As the pandemic evolved, the SPRP was updated in April to underline the importance of critical aspects of the public health response, and in particular to respond to the difficulties faced by many countries at that time by setting out clear criteria that countries could use to ensure that they exited lockdowns safely and sustainably.

The response strategy is organized around nine technical and operational response pillars (figure 4), plus a tenth overarching global research and innovation pillar. The strategy is designed to achieve three simple goals: to control transmission of the virus, to save lives, and to protect the vulnerable. The structure of the pillars is mirrored by WHO’s Incident Management Support Team (IMST) across all three levels of the organization: WHO’s global headquarters, its regional offices, and over 150 country offices. The IMST provides the technical, operational, planning, coordination, logistical, and safety management infrastructure to support the response at the appropriate organizational scale (subnational, national, regional and global).

Figure 4 The pillars of WHO’s response to COVID-19

There are 10 main pillars of WHO’s COVID-19 response, and these pillars can be divided into three broad groups. Seven discrete technical and operational pillars are underpinned by the two broad, cross-cutting pillars of coordination and planning, and operational support and logistics. Within each of the technical pillars is a component that intersects with a tenth pillar that coordinates and facilitates accelerated research and development in every area of the response. This structure forms the basis of the WHO Incident Management Support Team across all three levels of the Organization.
The SPRP was developed, and should be considered, in the context of WHO’s Thirteenth General Programme of Work (GPW13), which puts impact and delivering for countries at the heart of the Organization’s mission. GPW13 makes WHO accountable for three ambitious, overlapping targets: 1 billion more people better protected from health emergencies; 1 billion more people benefiting from universal health coverage; and 1 billion more people enjoying better health and well-being. Each of these three interlinked goals are directly challenged by COVID-19, and the pandemic is a challenge that has been met by the mobilization of the entire Organization (figure 5).

**Figure 5** COVID-19 intersects with WHO’s triple billion targets

Although the IMST structure is the same, the practical emphasis is different at each level of WHO. At the global level, the primary focus is on the rapid scaling, adaptation, and sustainability of key planning, coordination, and operational support platforms to facilitate the work of the technical pillars at all levels of the response. Within the technical pillars at the global level, there is a dual focus on: 1) the rapid development and periodic reappraisal of key norms, standards, and guidance to set the parameters and key requirements of an effective response at national level; and 2), working through the crosscutting operational platforms to ensure that countries are supported to meet those requirements. At the regional level, the primary focus is on working closely with countries to understand their detailed needs and contexts, and to adapt and tailor technical and operational support accordingly. Established partnerships with regional economic, political, and public health institutions provide key platforms through which WHO can multiply and coordinate support to countries. The national level and, increasingly, subnational level, is where these international and regional efforts translate into direct support for governments and affected populations.

The SPRP and its update provided a template that countries could adapt, with support from regional and country offices, to create their own national COVID-19 action plans. WHO’s direct support to countries has been targeted to support the delivery of those plans, but not all countries require or request the same degree of support from WHO, and the support requirements of many countries have changed over the course of the pandemic. For example, in countries with well developed health emergency preparedness and readiness capacities, WHO’s support is limited more to the provision and adaptation of the technical guidance, norms, and standards that are needed to guide the response. At the other end of the spectrum, particularly in countries or subnational areas that are fragile, conflict-affected, and/or vulnerable (FCV countries), WHO’s support is more operational, in some cases working with partners as a provider of last resort for essential services and commodities.
Looking back at a year that changed the world: WHO’s response to COVID-19

To prioritize countries for support during COVID-19, WHO has used several of the tools and platforms that have been developed and strengthened since 2016 to assess national health emergency preparedness and response capacities in line with the International Health Regulations. Assessments of national operational readiness to respond to COVID-19, and their vulnerability and risk, were based on a combination of the results reported through the self-assessment International Health Regulations State Parties Annual Reporting tool, information from voluntary joint external evaluations, and other contextual information from country-specific COVID-19 situation analysis. Other crucial factors included whether or not a country had been included in the UN Global Humanitarian Response Plan (GHRP) for COVID-19, and the current and projected position of a country on a continuum of intensity of COVID-19 transmission (figure 6).

Meeting the needs of countries has meant WHO has had to scale up its footprint at national level on a global scale. At a national level, the Organization has redirected more than half of its pre-COVID-19 human resources to the response, and temporarily added more than 1200 new people to the workforce to deliver the technical and operational support that governments have requested, with more than 60% of this surge in capacity concentrated in GHRP countries. This scale up was achieved rapidly, with the result that 80% of WHO country offices were providing technical support and support for procurement, logistics, information management, training and capacity strengthening by the end of February 2020 (figure 7).

WHO increases the degree of technical and operational support available to countries on the basis of their position on a spectrum of COVID-19 transmission risk and their preparedness and readiness capacities. Countries with uncontrolled community transmission and low preparedness and readiness capacities are given the highest priority for the greatest degree of support, which may include WHO and implementing partners acting as provider of last resort for essential health services and commodities.
Financing the plan for 2020

The results of the initial prioritization analysis have been regularly updated as the pandemic has evolved, and these results have guided WHO’s allocation of funds and resources throughout 2020. Of the US$ 1.5 billion that WHO has raised from more than 70 donors (see Annex B) throughout 2020 (table 1), including more than US$ 240 million from the COVID-19 Solidarity Response Fund (box 1), the vast majority of funds have been allocated to fund activities and the purchase and distribution of essential supplies and equipment at the regional and national level (figures 7, 8, and 9). Initial response activities during January, immediately following the emergence of COVID-19, were financed through the WHO Contingency Fund for Emergencies mechanism, which released US$ 10 million for the COVID-19 response during the first month of the response. A total of US$ 583.5 million was utilized to support national response in countries included in the GHRP (table 2). The majority (approximately 80%) of funding received by WHO for the response was earmarked to an extent, either geographically or otherwise designated for a circumscribed range of activities or materials (figure 10).

BOX 1

The COVID-19 Solidarity Response Fund

The COVID-19 Solidarity Response Fund for the World Health Organization (WHO) enables corporations, individuals, foundations, and other organizations around the world to directly support global efforts, led by WHO, to help countries prevent, detect, and respond to the COVID-19 pandemic.

The Solidarity Response Fund was created at the request of WHO by the United Nations Foundation (UNF) and the Swiss Philanthropy Foundation (SPF). The intended use of the Solidarity Response Fund is to contribute towards funding the COVID-19 SPRP. The Solidarity Response Fund is a first-of-its-kind platform for the private sector and the general public to actively accelerate and support global efforts to contain and mitigate the ongoing pandemic by pooling flexible financial resources.

The Solidarity Response Fund has also given rise to a unique opportunity for inter-agency collaboration, as it funds a broad range of activities needed to combat the pandemic, including those undertaken by key partners such as UNICEF, which has joined Solidarity Fund efforts to support vulnerable groups, and the World Food Programme (WFP), which has joined the Solidarity Fund efforts to deliver vital supplies to front-line responders during the pandemic.

Table 1  Availability and utilization of funds for 2020

<table>
<thead>
<tr>
<th>Funds available and utilization</th>
<th>US$ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds requested</td>
<td>1 740.0</td>
</tr>
<tr>
<td>Funds received</td>
<td>1 520.0</td>
</tr>
<tr>
<td>Funds for 2020 SPRP implementation</td>
<td>1 402.2</td>
</tr>
<tr>
<td>Utilization*</td>
<td>1 267.8</td>
</tr>
<tr>
<td>Balance</td>
<td>134.3</td>
</tr>
</tbody>
</table>

*Based on interim 2020 year-end figures and estimated 2021 Q1 transition period implementation. Balance carried forward for SPRP 2021 implementation.
Fully flexible funding can be used to fund urgent activities and purchase essential supplies and equipment to support any country on the basis of need. Use of designated funding is subject to a limited level of earmarking by donor, typically by geographical area or set of countries. Specified contributions are typically for use only in specific countries and/or pillar or set of activities.

*Based on interim 2020 year-end figures and estimated 2021 Q1 transition period implementation
Table 2  Utilization* of funds in Global Humanitarian Response Plan countries by WHO region

<table>
<thead>
<tr>
<th>Region</th>
<th>US$ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Office for Africa</td>
<td>156.3</td>
</tr>
<tr>
<td>Regional Office for the Americas and PAHO</td>
<td>67.3</td>
</tr>
<tr>
<td>Regional Office for the Eastern Mediterranean</td>
<td>294.8</td>
</tr>
<tr>
<td>Regional Office for Europe</td>
<td>36.8</td>
</tr>
<tr>
<td>Regional Office for the South-East Asia</td>
<td>17.7</td>
</tr>
<tr>
<td>Regional Office for the Western Pacific</td>
<td>10.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>583.5</strong></td>
</tr>
</tbody>
</table>

*Based on interim 2020 year-end figures and estimated 2021 Q1 transition period implementation

Table 3  Top 10 highest contributors to the SPRP

<table>
<thead>
<tr>
<th>Contributor</th>
<th>US$ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>434.00</td>
</tr>
<tr>
<td>European Commission</td>
<td>135.76</td>
</tr>
<tr>
<td>United Kingdom of Great Britain and Northern Ireland</td>
<td>127.68</td>
</tr>
<tr>
<td>COVID-19 Solidarity Response Fund</td>
<td>84.07</td>
</tr>
<tr>
<td>World Bank</td>
<td>65.56</td>
</tr>
<tr>
<td>Kuwait</td>
<td>60.00</td>
</tr>
<tr>
<td>Iran (Islamic Republic of; World Bank)</td>
<td>51.97</td>
</tr>
<tr>
<td>Japan</td>
<td>50.47</td>
</tr>
<tr>
<td>United States of America</td>
<td>36.57</td>
</tr>
<tr>
<td>United Nations Development Programme</td>
<td>33.35</td>
</tr>
</tbody>
</table>
PUTTING HEALTH AT THE HEART OF THE GLOBAL COVID-19 RESPONSE

Part 2 of this report describes how WHO has adapted and scaled up key platforms at the global, regional, and national level to support countries respond to COVID-19. The existence of these platforms, the Contingency Fund for Emergencies to kick start the response, and the Organization’s ability to respond to COVID-19 at a global scale owes a great deal to the foresight and the generosity of our donors.

Coordination and planning

Steering a global whole-of-UN response

COVID-19 is a crisis that touches every aspect of every society, and our collective response has had to encompass that broad range of needs and requirements on a global scale. Meeting that challenge has meant bringing the whole of the United Nations system together to coordinate a response that reflects the full spectrum of its capabilities. WHO has been at the forefront of that coordination process.

At the global level, overall UN coordination is achieved through the UN Crisis Management Team (UNCMT), which was triggered on 4 February 2020 and is led by WHO. This is the highest possible level of crisis alert in the UN system, and this is the first time this mechanism has been activated for a public health crisis. The UNCMT brings the collective strengths of 23 UN entities under one response umbrella, and met more than 25 times during 2020. These high-level meetings are essential in order to set and adjust strategic goals and resolve urgent issues as they arise in response to constant feedback from over 130 UN Country Teams and Resident Coordinators embedded in the response at national level. The COVID-19 supply chain platform, for example, was an initiative launched as a result of this process, and is described in more detail later as part of WHO’s work in operational support and logistics.

COVID-19 is a crisis that touches every aspect of every society, and our collective response has had to encompass that broad range of needs and requirements on a global scale.

Figure 11 GHRP priority countries, territories, and areas identified for targeted technical and operational support

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Priority countries, territories or areas

Afghanistan, Angola, Argentina, Aruba, Bangladesh, Benin, Bolivia, Brazil, Burundi, Burkina Faso, Cameroon, Central African Republic, Chad, Chile, Colombia, Costa Rica, Curaçao, Djibouti, Dominican Republic, Democratic People’s Republic of Korea, Democratic Republic of the Congo, Ecuador, Egypt, Ethiopia, Guyana, Haiti, Iran, Iraq, Jordan, Kenya, Lebanon, Liberia, Libya, Mali, Mexico, Mozambique, Myanmar, Niger, Nigeria, oPt, Pakistan, Panama, Paraguay, Peru, Philippines, Republic of Congo, Rwanda, Sierra Leone, Somalia, South Sudan, Sudan, Syria, Tanzania, Togo, Trinidad and Tobago, Turkey, Uganda, Ukraine, Uruguay, Venezuela, Yemen, Zambia, Zimbabwe.

* Aruba (Netherlands), Curaçao (Netherlands)

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The formation of the UNCMT facilitated the development of two further strategic frameworks to complement the SPRP, with its focus on the public health response to COVID-19 (figure 11). The Global Humanitarian Response Plan (GHRP) for COVID-19 was published on 25 March, updated on 7 May, and sets out the strategy for a whole-of-UN response to the effects of COVID-19 in the 63 countries around the world with the most pressing humanitarian needs (figure 12). Under the umbrella of the GHRP, the members of the Inter-Agency Standing Committee (IASC), effectively encompassing the entire humanitarian system and including WHO, have been able to coordinate their actions to address the most urgent humanitarian health, protection and socioeconomic needs caused by the pandemic. At WHO’s request, the heads of the IASC agencies initiated a UN system-wide scale-up – the highest level of emergency response for the humanitarian system.

At the same time as the development of the GHRP, the UN Development Coordination Office (UNDCO) led the development of a UN framework for the immediate socio-economic response to COVID 19, which outlines an integrated support package offered by the UN Development System to protect the needs and rights of people living under the duress of the pandemic, with a focus on the most vulnerable countries. With WHO’s input, both the GHRP and the Socio-economic framework have substantial public health components, ensuring that health is at the heart of the whole-of-UN response, with WHO at the forefront of delivery.

Figure 12 Complementary strategies make up the whole-of-UN approach

<table>
<thead>
<tr>
<th>Strategic preparedness and response plan</th>
<th>Global humanitarian response plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordination, planning, and monitoring</td>
<td></td>
</tr>
<tr>
<td>Accelerated research and development</td>
<td></td>
</tr>
<tr>
<td>Risk communication and community engagement</td>
<td></td>
</tr>
<tr>
<td>Surveillance</td>
<td></td>
</tr>
<tr>
<td>Laboratories</td>
<td></td>
</tr>
<tr>
<td>Points of entry, and international travel</td>
<td></td>
</tr>
<tr>
<td>Case management</td>
<td></td>
</tr>
<tr>
<td>Infection prevention and control</td>
<td></td>
</tr>
<tr>
<td>Technical support and guidance</td>
<td></td>
</tr>
<tr>
<td>Operational support and logistics</td>
<td></td>
</tr>
<tr>
<td>Essential health services and systems</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Socio-economic response plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protecting people</td>
</tr>
<tr>
<td>Economic recovery</td>
</tr>
<tr>
<td>Macroeconomic response</td>
</tr>
<tr>
<td>Social cohesion</td>
</tr>
</tbody>
</table>

WHO is working to ensure that 1 billion more people are better protected from health emergencies; Pictured here, is the team at the Thai National Influenza Centre at the National Institute of Health, that validated the virus DNA to confirm the first COVID-19 case in Thailand. The Institute is part of the Ministry of Public Health.
As Health Cluster Lead Agency, WHO leads the efforts to integrate and deliver the public health response to COVID-19 through the GHRP, providing coordination and operational support in 30 countries in partnership with 900 national and international partners, to implement the GHRP and maintain essential health services. This task is streamlined by the Global Health Cluster COVID-19 Task Team, based at WHO headquarters, which identifies critical challenges and supports the adaptation and implementation of WHO COVID-19 guidance in low-capacity, humanitarian settings, and captures and disseminates good practice. The Global Health Cluster also co-leads the Global Information Management, Assessment and Analysis Cell, which manages and analyzes COVID-19-related information to support global decision-making, and provides technical support and services to prioritized countries (figure 11).

At the regional level, WHO Regional Directors coordinate with UN Development Coordination Office Regional Directors on strategy, planning and information sharing. A number of technical and operational bodies have been established at regional level to facilitate coordination between UN and other partners for multi-sectorial action, including regional public health institutes and development banks.

The Global Health Cluster Public Health Information System dashboard provides a quarterly update on the status of key response indicators in all countries where there is an activated Health Cluster.
Within the overall response at the national level, the UNCMT coordinates with UN Country Teams in 136 countries to facilitate joint action by UN entities and international agencies in support of national authorities. WHO country offices play vital strategic, technical and operational roles within the UNCTs. All six WHO regional offices and all 150 country offices have activated a COVID-19 IMST to provide operational and technical support to national governments in all aspects of readiness and response, including planning and coordination.

WHO’s direct support for planning and coordination role at the national level has been multifaceted. First, WHO’s country and regional offices have worked closely to support national authorities to tailor the WHO SPRP to their own national contexts in the form of national COVID-19 preparedness and response plans. This support has been provided either in situ by country offices and/or technical missions deployed from regional offices, or remotely where travel restrictions have prevented direct deployments. More than half of all staff in WHO country offices have dedicated time to the COVID-19 response, and all programmes have had to adjust ways of working to account for and support the COVID-19 response. The process of formulating national actions plans was aided by the publication of operational planning guidelines guidance, which was developed by WHO to provide a practical guide to develop and update COVID-19 national plans across the major pillars of COVID-19 preparedness and response. The proportion of countries, territories and areas in all regions with a preparedness and response plan increased from 47% in March 2020 to 91% by 31 December 2020, with an increase from 45% to 97% in the proportion of countries, territories and areas with a functional COVID-19 coordination mechanism. The target for both indicators is 100%.

Supporting and enabling national planning and coordination

With national plans in place, the next step is to match available international support and resources to address any gaps, and to continually monitor implementation and adjust course as appropriate. The COVID-19 Partners Platform (box 2, figure 14) is designed to enable national and international partners to come together with national authorities to plan, track, and resource the COVID-19 response.

Initially the Platform offered three main features:

- an action checklist to review and monitor the status of implementation across the nine main pillars of the public health response;
- a resource tracker to highlight country resource needs (financial, supplies, and personnel) to deliver the necessary public health response;
- a resource tracking database to provide a transparent overview of donor contributions to the COVID-19 response.

Further functionality has been added in response to feedback from users, including a direct link to the COVID-19 Supply Chain System via a supply portal integrated into the platform. With more than 120 countries and 80 donors actively using the platform, further feedback will enable the platform to continue to evolve to meet changing requirements.

“The Partners Platform, created at the end of January, has become a critical tool to help countries highlight financial, supply and personnel needs and deliver the necessary public health response.”

Dr Tedros Adhanom Ghebreyesus

Director-General, World Health Organization
BOX 2

Partners Platform: uniting behind a shared plan

When COVID-19 began spreading, countries needed to plan, coordinate, and resource their response. Pakistan, for example, recognized the urgent need to adopt a strategic approach to identifying needs, developing a country-level response plan, and coordinating at both the national and provincial level. Pakistan health officials began to work closely with WHO and the UN Resident Coordinator to plan the COVID-19 response, launching the Pakistan Preparedness and Response Plan in April. And key to creating and implementing the plan was the online Partners Platform.

Countries can build and tailor their own response plans using the platform, choosing from a checklist of 143 key actions based on constantly updated expert guidance from WHO and other key response partners. All actions are fully costed, which enables countries to note where they need financial assistance and donors to track what actions are taking place, where the biggest resource needs and gaps lie, and how to prioritize which allocations go where. Crucially, the Partners Platform is the only place where the major donor partners can see what each other is doing in the emergency response, make informed decisions, and coordinate. By using the Platform, partners can visualize which regions in the country need more help and direct their donations accordingly.

“For the first time we have a tool that allows us to monitor fund flow, this is both operationally useful and a great service to all our partners,” says Mr. Julien Harneis, UN Resident Coordinator of Pakistan. During 2020 a total of 18 major donors provided information on their contributions to support the countries COVID-19 Preparedness and Response Plan totalling more than US$ 1.2 billion. Pakistan’s successful use of the Platform has been replicated globally. By the end of 2020, 90 countries had shared their public health response resource needs totalling US$ 9.3 billion, with 77 donors detailing more than US$ 15 billion in contributions to finance the public health and other aspects of the response.

Figure 14 The COVID-19 Partners Platform*

- 5 798 users spanning across 992 organizations and 207 countries, territories and areas
- 119 countries, territories and areas sharing national response plans
- 106 countries, territories and areas tracking actions under pillars of public health for entire national system
- To date, 90 countries shared resource needs totaling US$ 9.28 billion across nine response pillars
- 77 donors responded totaling approximately US$ 15.4 billion

*Data as of 31 December 2020
Keeping track and adjusting course

Real-time strategic planning and adjustment, coordination, and evidence-based decision-making depends on access to quality and timely operational and situational tracking data. In addition to WHO’s core role in the management and communication of epidemiological data (described in more detail later), WHO’s COVID-19 monitoring and evaluation framework gathers and publishes key performance and situational data for a set of global and national indicators (Annex A). These indicators are publicly available and regularly updated to ensure that the response is able to evolve as the pandemic changes course. In addition, WHO’s Guidance for Conducting a Country COVID-19 Intra-Action Review (IAR) was developed to guide countries to conduct periodic reviews of their national and subnational COVID-19 response. IAR’s are a country-led facilitated process that bring together a small group of COVID-19 responders with knowledge of the public health response to identify practical areas for immediate remediation and sustained improvement of the ongoing response.

Translating evidence into knowledge and action

Activating a WHO core strength

Since January 2020, when COVID-19 was first identified, WHO has been able to leverage its unique core strength as a technical and normative agency to rapidly gather and synthesize evidence into authoritative technical guidance across a broad range of thematic areas covering the spectrum of the public health response.

Drawing extensively on WHO’s convening power, expert networks, advisory groups, collaborating centres, and strong ties with national knowledge and expertise has enabled the Organization to continually ask questions with profound implications for our collective understanding of what constitutes an effective response and how we achieve it: what do we know about the virus, and what works most effectively to control it in different contexts? Asking these questions systematically, pillar by pillar, about every aspect of the public health response has enabled WHO to publish and periodically reappraise, and support the implementation of more than 500 guidance documents and scientific briefings, ranging from how best to safely transition out of a lockdown to advice on the appropriate use of masks in different situations (figure 15; figure 16). The Strategic and Technical Advisory Group on Infectious Hazards (STAG-IH) held its first of many meetings on COVID-19 in January, and has been a vital mechanism through which many critical questions have been addressed to inform the global response.

WHO published the first tranche of core COVID-19-specific guidance for countries over three days from 10 January, covering topics related to the management of an outbreak of a new disease, including:

- infection prevention and control;
- laboratory testing;
- national capacities review tool;
- risk communication and community engagement;
- disease commodity package;
- travel advice;
- clinical management;
- surveillance case definitions.

Some of the key documents and guidance notes are explained in more detail below, under the appropriate headings.

What do we know about the virus, and what works most effectively to control it in different contexts?
Looking back at a year that changed the world: WHO’s response to COVID-19

**Leverage evidence and expertise**
- Expert networks
- Collaborating centres
- Strategic advisory groups
- Massive online consultations/meetings
- R&D Blueprint for Epidemics
- Multi-country studies/trials (Solidarity, Unity)

**Monitoring and Learning**
- KPI driven monitoring and evaluation
- Country case studies and reports
- Targeted operational research
- Infodemic monitoring and engagement
- Inter-action reviews and SimEx support
- Regional Consultations and engagement with country offices and Member States

**Authoritative, accessible guidance**
- Rapid, constantly re-evaluated
- Multi-disciplinary
- Multi-lingual
- Multi-agency
- Adapted to different contexts
- Content shared through multiple channels

**Implementation**
- Digital transformation of knowledge into learning using innovative training platform: OpenWHO
- 150+ country offices and six regional platforms provide tailored operational and technical support
- Multi-agency operational platforms surge people and material resources (UN supply chain; EMTs; GOARN, TECHNE)

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*Figure 16  Knowledge to action – a dynamic adaptive system*
Putting knowledge into practice

WHO regional offices play a vital role in the development of guidance, but also make a unique contribution through their work to adapt and translate relevant guidance to national and subnational contexts. This is essential to ensure that the guidance process is not a dry academic exercise, but is brought to life in practice. Another key platform for ensuring that guidance is translated into knowledge and action is training. The OpenWHO training platform was created in 2017 to provide targeted and disease-specific training for health workers and responders before and during emergencies – a need that was clearly identified during the 2014 outbreak of Ebola virus disease in west Africa.

The training programmes and modules on the OpenWHO platform are based on the latest state-of-the-art knowledge from WHO guidelines (figure 17), and are updated to reflect any changes in light of new evidence. Uptake on the platform had been steady since its launch in January 2017, but has exploded during 2020 as a result of the huge global appetite for knowledge and training about COVID-19. By the end of 2020 more than 4.7 million people had enrolled on the platform (figure 18), and more than 2.5 million certificates of completion has been issued for 148 COVID-19-specific courses ranging from clinical care and the use of personal protective equipment to training for filed data tools available in more than 42 languages. More modules are planned for 2021.

In November 2020, OpenWHO.org was named Gold Winner for the ‘Best international digital transformation of a training programme in response to COVID-19’ by the Learning Technologies Awards.

By the end of 2020 more than 4.7 million people had enrolled on OpenWHO.
Real-time, rapid response capacity strengthening and support

Online training is an extremely powerful tool through which WHO can reach a large global audience to strengthen national capacities. However, there are specific specialized areas that require more immediate, direct, and short-term solutions during emergencies, either in the form of in-person training programmes and/or through surge deployments to boost critical capacity.

WHO regional offices, often working in concert with key regional partners, have been one of the primary vehicles through which WHO has been able to support countries through the deployment of technical support missions. These missions enable experts from WHO and partners to deliver targeted and tailored technical guidance and training in critical tools and systems. Despite the ongoing travel restrictions and disruption, WHO regional offices have continued to deploy experts to support countries in situ wherever safe, with missions to over 130 countries during 2020, implementing innovative digital solutions such as webinars and remote working where restrictions make direct deployment unfeasible. Regional platforms have also been an essential support-delivery tool as the pandemic has progressed.

Surge support and training is also where two established WHO emergency platforms – the Emergency Medical Teams (EMT; box 3) initiative and the Global Outbreak Alert and Response Network (GOARN) – have excelled during COVID-19.

Access to a well-trained, rapidly deployable, certified and largely self-sufficient surge emergency health workforce has been vital for many countries that found health services overstretched, and in some cases overwhelmed, by the explosive nature of COVID-19 transmission. WHO facilitates that access through more than 100 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. More than 30 EMTs certified for international deployment were able to respond to 60 requests for support from another country during 2020. Most often these deployments were made within WHO regions, with teams from regional neighbours best placed and more than willing to work in solidarity with host countries. In addition to these international deployments, a further 46 national teams across all WHO regions were deployed within their own national borders to respond to acute needs at the subnational level.

Given the unprecedented volume of deployments throughout 2020, the WHO EMT Secretariat has surveyed the EMT network to identify challenges and opportunities to inform future EMT deployments, refine the EMT deployment mechanism, and the EMT Global Classification process. The results of the survey are being analysed and will provide a more comprehensive understanding of EMT fieldwork and lessons learned as the initiative prepares for 2021.

WHO regional offices, often working in concert with key regional partners, have been one of the primary vehicles through which WHO has been able to support countries.
Emergency Medical Teams (EMTs) are WHO-classified teams of health-care professionals who can be deployed to provide immediate assistance to countries and territories during natural disasters, outbreaks and emergencies. During the COVID-19 pandemic, demand for EMTs surged across different regions, and WHO facilitated the transfer of knowledge and practices in the spirit of solidarity.

In the WHO European Region, eight EMTs have responded to requests for assistance from six different countries to help with the COVID-19 response in 2020. The Region has 50% of global EMT capacity, with 15 WHO-classified teams and more than 30 others under mentorship, ready to be deployed in the coming years.

In 2020, a new twinning programme encouraged experienced EMTs to partner with interested Member States and nongovernmental organizations to help them strengthen national emergency response capacities that have played a key role in COVID-19 response.

Georgia and Germany were the first to collaborate in this way. Georgia benefitted from German EMT expertise to train its own national team, which then became heavily involved in the country’s COVID-19 response. Azerbaijan and Turkey are now adopting the same formula. Demand for homegrown EMTs has increased during the pandemic, with support from national governments or nongovernmental organizations.

Dr Harald Veen, a mentor for the WHO EMT initiative, says the focus is on building national teams that can respond rapidly in a crisis. “The health professionals in these teams used to be focused on packing up to leave for another country, but with COVID-19 everything changed, and there was an immediate need for their expertise at a national level.”

Alongside the twinning programme, a mentorship scheme enables a greater number of teams to quickly reach the required standards for WHO classification and subsequent deployment. The WHO scheme encourages established EMTs to offer advice and support to newer, yet-to-be-classified teams. There are currently 65 teams under mentorship globally, and a further 28 teams have declared an interest in starting the process.

Team leader Dr Wojtek Wilk describes how mentors from Spain helped his EMT from Poland develop their skills related to issues of water supply, water treatment and sewerage. Teams must demonstrate competence outside their specialist areas and, he says, “mentorship is therefore a major part of the global classification process. A mentor provides advice and hope and is of immense help in overcoming obstacles.”

During the COVID-19 pandemic, EMTs have adapted to provide on-the-job COVID-19 training and support to ministries of health. They aim to strengthen triage and hospital referral procedures and improve infection prevention and control measures, including proper patient flow and treatment protocols for COVID-19 patients.

Dr Wilk explains that this reflects a shift in the way EMTs operate. For example, professionals with expertise in treating patients directly in field hospitals and intensive care units and dealing with trauma and surgical interventions have found themselves needing to employ a different range of skills during the pandemic. The training and capacity-building component of their work has come to the fore during this time.

The programme is a tangible manifestation of solidarity during the duress of the COVID-19 pandemic, notes Dr Wilk. “I was asked recently if there is fear associated with working in a COVID-19 hospital,” he recalls. “The only answer I could think of was, ‘there is fear, of course, but somebody has to do it’. The world needs teams that can deploy to wherever there is a need, if the situation in their home country permits. This is assistance, but also solidarity.”
GOARN partners are drawn from a global network of expert institutions and health and humanitarian emergency response Organizations. Throughout 2020 GOARN partners made in excess of 400 offers of technical support, with experts deployed from around 30 partner institutions and technical networks to provide direct and remote support to countries at their request. Many deployments are made within region, leveraging the regional expertise of partner institutes. GOARN colleagues from UNICEF, IFRC, US CDC, and OCHA are embedded in the global COVID 19 incident management team, supporting WHO’s work across all pillars of response.

WHO and GOARN partners are also supporting over 60 projects worldwide to implement Go.Data – an app for contact tracing and outbreak response developed by WHO in collaboration with partners in GOARN. Go.Data is a simple to use but powerful app that integrates a database and user interface to help gather and analyse case and contact data, including laboratory data, clinical outcomes and other details from case investigations. The app is particularly useful for the management of contact follow-up and the visualization of chains of transmission for epidemiological investigation.

Training, briefings, and direct user and technical support have been provided by WHO and GOARN partners both remotely and in country throughout 2020. More recently, in the fourth quarter of 2020 the Go.Data community of practice was launched, and now serves as the main point of communication for users worldwide seeking the latest information and documentation, tips, training materials, and troubleshooting. An OpenWHO course is also available, with more than 100 000 unique users during 2020.
Surveillance, contact tracing, isolation and quarantine: the backbone of outbreak response

Disease surveillance and the public health capacities to identify, isolate and treat cases, and trace and quarantine contacts, are the backbones of the COVID-19 response and the keys to controlling transmission in the absence of a widely available vaccine. Stopping the spread of SARS-CoV-2 means ensuring that all cases are promptly and effectively isolated and receive appropriate care, and that the close contacts of all cases are rapidly identified so that they can be quarantined and medically monitored for the 14 day maximum incubation period of the virus. At the global, regional, and national level, WHO has scaled up and adapted existing platforms, and implemented new platforms for surveillance and public health measures to support countries.

WHO took rapid action with partners in January to establish a global surveillance system that gathers standardized data at global, regional, and country levels. Each day throughout 2020 WHO has undertaken the considerable task of collating, validating, analysing and disseminating official daily case and death counts reported by 212 countries, territories and areas. These data are routinely published through a wealth of country and region-specific situation reports and dashboards, as well as globally via the WHO COVID-19 Dashboard (figure 19) - which has continued to receive between 1-2 million visitors per week during 2020.

WHO’s technical guidance, translated and adapted at regional and at country level to specific contexts, covers every aspect of COVID-19 surveillance, case investigation and epidemiology, from the case definition through to the use of digital tools for contact tracing and the use of rapid diagnostic tests. This guidance is constantly updated to take into account advances in our collective understanding of the virus and new developments in technology. Direct technical support to countries to train and support national epidemiologists is deployed from WHO headquarters, regional offices, and country offices, and through partnerships such as GOARN.

Putting guidelines and training into practice requires a large, adaptable and trained workforce. In many cases WHO has been able to support national authorities to train newly recruited and volunteer contact tracers and surveillance officers to rapidly scale up their public health workforce (box 4). However, in some cases a different approach has been required to meet capacity requirements. The redeployment of WHO’s highly skilled Poliovirus response teams and TB programme resources at subnational levels in response to COVID-19 (box 5, box 6) has shown that, even in the most challenging circumstances, an agile, multidisciplinary rapid-response emergency workforce can ensure that populations in some of the most vulnerable and fragile contexts can benefit from a comprehensive public health approach to COVID-19.

At the global, regional, and national level, WHO has scaled up and adapted existing platforms, and implemented new platforms for surveillance and public health measures to support countries.

BOX 4

Boosting contact tracing in Chad

Almost 190 medical students in Chad, trained by the ministry with the support of WHO, are helping to take the pressure off Chad’s health workforce during the country’s response to COVID-19. Chad has just 4.3 doctors and 23.2 nurses per 100 000 inhabitants, the majority of whom are in the capital N’Djamena.

The medical students in Chad have been trained to follow up with people asked to quarantine due to COVID-19, and to carry out screening at points of entry. Support from the students has improved case investigation, and increased capacity for the control and surveillance of travellers at N’Djamena entry points and in the provinces. WHO provided training, and equipped the new recruits with gloves, masks, non-contact infrared forehead thermometers, contact-tracking sheets.

After a peak in the number of confirmed cases in early May, Chad succeeded in significantly reducing transmission.
WHO Polio Eradication Officers have played a crucial role in the COVID-19 response, applying their wide range of skills to support communities in some of the world’s most fragile, vulnerable, and conflict-affected settings. Controlling the COVID-19 pandemic is essential to prevent an increase in vaccine-preventable diseases – including polio – by helping to limit the impact of the pandemic on routine immunization programmes in vulnerable contexts. Here we shine the spotlight on four WHO Polio Eradication officers who have stepped up to take on COVID-19.

**Nasrin Ahmadi, District Polio Officer in Afghanistan**

“I chose to continue to do public health awareness during the COVID-19 pandemic. I wanted to help save people’s lives and continue to serve my people,” says Nasrin Ahmadi, a polio worker and volunteer for the COVID-19 response in Balkh province in Afghanistan.

Eight months since the first COVID-19 case was reported in Afghanistan, polio programme frontline workers continue to support outbreak response. During the pandemic, Nasrin has taken on extra duties to identify suspected COVID-19 cases, share accurate information with communities, and trace individuals returning from abroad to encourage them to isolate. Throughout, she has continued to educate families on the importance of polio vaccination.

**Mohamed Sharif Mohamed, Regional Polio Eradication Officer in Somalia**

In addition to his polio duties, Mohamed provides COVID-19 support to 17 districts in Banadir, Somalia, through coordinating and training COVID-19 teams, carrying out active surveillance visits to health facilities and reviewing reports submitted by district polio officers on the pandemic response. In September, he took part in the first immunization campaign to resume in Somalia since COVID-19 arrived in the country. All children who took part in the campaign were offered deworming tablets and vitamin A in addition to measles and polio vaccines. Delivering multiple services is crucial in the context of ongoing polio and measles outbreaks in Somalia, and low overall population immunity.
Looking back at a year that changed the world: WHO's response to COVID-19

BOX 5 (continued)

Samreen Khalil, Polio Eradication Officer in Pakistan

Polio teams in Pakistan have been working to support the COVID-19 response since the beginning of the pandemic, as well as continuing with their work to eradicate polio.

In Peshawar, the team has adapted existing acute flaccid paralysis (AFP) surveillance networks embedded in hospitals and health facilities to detect COVID-19 as well as polio. Polio staff like Dr Samreen Khalil have been helping with testing and have trained health workers on infection prevention and control. Polio data management systems across the country and a call centre in the capital, Islamabad, assist in addressing misinformation and helping to detect suspected COVID-19 cases.

Sylvester Maleghemi, Polio Team Lead in South Sudan

In the African region, the polio eradication programme has a long history of responding to other disease outbreaks and health emergencies. With its unmatched technical expertise, disease surveillance and logistics capacities as well as wide community networks, the polio team in South Sudan was perfectly placed to mobilise a large-scale emergency response to COVID-19, while maintaining polio eradication efforts.

Sylvester Maleghemi, WHO Polio Team Lead in South Sudan, explains, “Across Africa, polio infrastructure and staff are found at district, province, all the way to the national level, so whenever there’s an outbreak, polio teams are always the first to respond.”

BOX 6

Using TB resources to fight COVID-19

During the COVID-19 pandemic in Nigeria, WHO has been supporting the government in an initiative to improve contact tracing, active case searching and testing using the existing Tuberculosis (TB) infrastructure in the country.

The outbreak of COVID-19 in February 2020 and the public health response measures put in place to curtail the spread of the pandemic led to fear the virus might impact active TB case finding activities. Instead, WHO and health officials have been using the structure to effectively combine case detection for TB and COVID-19.

In States like Niger, 18 WHO TB supervisors and disease surveillance and notification officers (DSNO) have been designated as super-trainers. During contact tracing, WHO has also been sensitizing surveillance teams on symptoms and detecting TB and COVID-19.

From April to June 2020, 30 rural communities were visited, 3,072 households were screened with 2,235 suspected TB patients identified out of which 277 TB patients were notified through the Niger state TB & Leprosy control program, all being tested for COVID-19.

WHO continues to support Nigeria at all levels to ensure that the COVID-19 response takes advantage of extensive structures and human resources available in the TB control programme to increase detection, diagnosis and management of cases at the community level.

Dr Samreen Khalil, WHO Polio Eradication Officer, collects a sample from Muhammad Shabir at his residence to test for COVID-19 on 10 July 2020 in Peshawar, Pakistan.

In the African region, the polio eradication programme has a long history of responding to other disease outbreaks and health emergencies. With its unmatched technical expertise, disease surveillance and logistics capacities as well as wide community networks, the polio team was perfectly placed to mobilise a large-scale emergency response to COVID-19, while maintaining polio eradication efforts.

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In addition to active surveillance for COVID-19, WHO also recommends that countries use existing syndromic respiratory disease surveillance systems such as those for influenza-like illness (ILI) or severe acute respiratory infection (SARI) for COVID-19 surveillance. Using existing systems and platforms is an efficient and cost-effective approach to enhancing COVID-19 surveillance. Using the established WHO Global Influenza Surveillance and Response System (GISRS), countries are testing for COVID-19 disease in clinical specimens coming in from influenza sentinel surveillance sites every week.

Serological surveillance determines how widespread a virus has been in a population by looking for antibodies to the virus in blood samples from the general population. This type of surveillance is crucial to help us 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. WHO has launched the Unity Studies to enable any country, in any resource setting, to rapidly gather data on these key epidemiological parameters to understand and respond to the COVID-19 pandemic. A total of 63 countries have already initiated Unity Studies. The WHO African and European regions are currently leading the way, with 19 countries in each region having implemented a study. A total of 111 countries intend to launch at least one Unity Study. Results from these studies could play an important part in decisions about the design and timing of national and regional immunization strategies as vaccines start to become available. Importantly, the Unity Study protocols are designed to make it easy to share, aggregate, and analyse data at the global level to support global decision-making.

The appetite of the global public for authoritative, verified, and timely epidemiological data has been unprecedented. Regional and global WHO COVID-19 Situation Reports have continued to serve as a digest of global epidemiological trends, whilst highlighting important recent events, guidance and actions taken by WHO and partners. Over 300 situation and operation reports have been published, and are viewed by over 3 million readers each week.

In addition, and in collaboration with international organizations, academic institutions and public health agencies, a global open content dataset of public health and social measures (PHSM) implemented by countries is maintained and updated regularly. Data from all sources are quality checked, harmonized and maintained in a central database. Guidance has also been provided to countries on monitoring transmission intensity, health system capacity, and the use of other key performance and situational indicators to guide the evidence-based recalibration of PHSM.

**Figure 19** COVID-19 dashboard

The WHO COVID-19 Dashboard publishes daily verified data on cases and deaths in each country and WHO region. The dashboard was viewed by between 1 million and 2 million visitors per week throughout 2020.
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Laboratories and diagnostics

Diagnostic laboratory testing is a cornerstone of the management of the COVID-19 pandemic. It allows for the detection of cases to inform care and for the isolation of infected individuals to interrupt disease transmission. Confirmatory testing also enables the disease to be tracked in the community, and for clusters of cases to be identified. From the outset in January WHO worked across multiple platforms to ensure that all countries have access to the technical expertise, equipment, supplies, and logistics capacity to ensure timely and accurate testing capacity for COVID-19.

Working with a partner laboratory in Germany, Charité University, WHO published the first instructions on how to set up a validated polymerase chain reaction (PCR) test for COVID-19 within just 2 weeks of the publication of the COVID-19 genome sequence in early January 2020. By the third week of January 2020, WHO had contracted manufacturers to produce the necessary reagents and supplies for SARS-CoV-2 PCR tests. WHO began shipping PCR tests to over 150 labs around the world before February 2020, and has continued strengthening its support for national efforts since.

WHO is supporting COVID-19 preparedness and response for vulnerable Rohingya refugees and host communities in Cox’s Bazar, Bangladesh. WHO assisted the IEDCR (Institute of Epidemiology Disease Control And Research) Field Laboratory in Cox’s Bazar to increase COVID-19 testing capacity from around 100 tests per day to over 1500 per day. Pictured here, a laboratory technologist completes a PCR test at the IEDCR Field Laboratory in Cox’s Bazar Medical College.

BOX 7

Expanding COVID-19 testing in the Philippines

Since first cases of COVID-19 were detected in the Philippines, the WHO country office, with support from a grant from the European Commission, has worked closely with both the Department of Health and local governments to establish and accredit COVID-19 testing laboratories across the regions.

In May 2020 there were 23 real-time reverse transcription polymerase chain reaction (rRT-PCR) laboratories in major regions. By October 2020 capacity had increased to 112 laboratories operating in all regions and able to test samples. Thirty-five licensed cartridge-based PCR or GeneXpert laboratories are now operating in almost all regions.

With the increase in laboratory capacity, WHO and the Government turned their attention to strengthening competency and proficiency through training. The WHO team rapidly responded to the need for capacity strengthening for COVID-19 diagnostics in Zamboanga City in Mindanao during a large cluster of infections were recorded between June and July. WHO has also provided the National Reference Laboratory and five other subnational laboratories with reagents, test kits, extraction kits, and other consumables.
Working from a blueprint that WHO has used for numerous other high-threat pathogens, the Organization rapidly established a reference laboratory network across the six WHO regions. The network now includes 24 laboratories with expertise in virology, diagnostics, sequencing, and viral culture. Initially, one of the primary functions of these laboratories was to support countries that did not have testing capacity, or that needed to have results confirmed. By the fourth quarter of 2020 all countries and territories surveyed by WHO could test for the SARS-CoV-2 virus (box 7). Progress has been especially rapid in the WHO African region. In February 2020 only two laboratories in the WHO African Region could diagnose a COVID-19 case. By October 2020 there were 750 laboratories across the region able to test for the SARS-CoV-2 virus and, crucially, testing has been decentralized in many countries to significantly reduce the turn around time for results.

The reference laboratory network is now increasingly involved in quality assurance, capacity strengthening and strategic planning, but there are still considerable challenges to overcome in ensuring that countries maintain and increase their testing capacity. As demand for tests has exceeded supply and led to international shortages, WHO’s operational support and logistics team and partners across WHO regional offices have worked with WHO’s technical experts to ensure that national laboratories continue to be resupplied with quality-assured reagents and other consumables. By 31 December 2020, WHO had procured and shipped more than 19 million tests. It will be vital to maintain sustain this mechanism throughout 2021.

PCR tests remain the gold standard of SARS-CoV-2 testing for accuracy, but other types of tests have also been developed, including rapid antigen detection tests. These are faster, easier to administer and considerably cheaper. Although they are not a replacement for PCR tests, they can provide an important boost to testing capacity under the right circumstances (box 8).

In October, WHO worked with partners including the Africa Centres for Disease Control and Prevention, the Bill & Melinda Gates Foundation, the Clinton Health Access Initiative, the Foundation for Innovative New Diagnostics (FIND), the Global Fund, and Unitaid, to reach a milestone agreement with manufacturers to make 120 million rapid antigen tests available to low-income and middle-income countries through the ACT-Accelerator (see below for more on the ACT-Accelerator). FIND and WHO are working together to accelerate appropriate use by supporting implementation research to optimize the use of rapid tests in line with WHO guidance. Rapid tests may be especially useful in areas where community transmission is widespread and where PCR testing is either unavailable or, more likely, where test results are significantly delayed. As well as supporting test, trace, and isolate strategies, the tests can help to rapidly identify or confirm new outbreaks; support outbreak investigations through screening; and monitor disease trends.

**BOX 8**

**Antigen testing in the Americas**

The WHO Regional Office of the Americas (WHO/PAHO) has deployed 190,000 new COVID-19 antigen diagnostic tests to Ecuador, El Salvador, Honduras and Suriname, and is conducting training to implement pilot testing of their operation. In addition, consultations and training on implementation of the COVID-19 antigen-based rapid diagnostic test are being undertaken in Jamaica, the Bolivarian Republic of Venezuela, Honduras, Costa Rica, and Trinidad and Tobago. These tests, recently approved by WHO, could transform the COVID-19 response by allowing healthworkers to undertake accurate, rapid testing of symptomatic patients, even in remote communities.

“By providing results quickly, the new test will empower frontline health workers to better manage cases by isolating patients to prevent further spread and to begin treatment immediately”, the WHO Regional Director for the Americas, Carissa Etienne commented.

WHO/PAHO’s Strategic Fund, a regional mechanism for pooled procurement of essential medicines and health supplies, is facilitating access to these diagnostic tests, which fall within the remit of the ACT-Accelerator.
Managing the infodemic, risk communication, community engagement

The widespread use of mobile technology and social media has fundamentally changed many aspects of our daily lives, and the production and consumption of risk communication during health emergencies is no different. During outbreaks, the potential for misinformation and disinformation has multiplied exponentially over the past decade as these technologies have grown in popularity. The problems of misinformation, disinformation, a lack of information, and information presented in a way that is not accessible to some communities have increasingly been identified as a significant exacerbating factor during other recent health emergencies, but COVID-19 has given the issue a global dimension. The infodemic has the potential to cause real harm wherever and whenever it is allowed to go unchecked. WHO’s work on infodemic management ensures that WHO’s is not only the authoritative voice on COVID-19, but a relatable one that resonates with individuals and communities everywhere. The aim of infodemic management is to make information available at the right time, and present that information in the right way, in order to bring about positive behavior changes during and in advance of health emergencies.

WHO’s approach to infodemic management is multifaceted. The WHO Information Network for Epidemics (EPI-WIN) covers four strategic areas of work to respond to infodemics: (i) identifying, gathering and assessing real-time evidence to help form public health recommendations and policies; (ii) simplifying this knowledge into actionable behavioral change messages; (iii) amplifying impact by engaging communities and reaching out to key stakeholders in communities with tailored advice and messages; and (iv), quantifying, monitoring, and tracking the infodemic through social media technology platforms to guide the effectiveness of public health measures.

EPI-WIN transforms WHO guidelines into easily digestible animations, mythbusters and infographics tailored to different communities of users, and translated into many different languages.
WHO EPI-WIN translates new science into evidence-based messaging and information products. The platform works with faith-based organizations, employers and workers, the health sector, cities and local governments, the travel and tourism sector, event organizers and many other groups; producing a wealth of mythbusters, running fact checks, and hosting and convening webinars and conferences specifically aimed at countering the flow of misinformation.

To better address audience and community needs, EPI-WIN convenes regular engagement webinars with key stakeholders to understand their concerns and information needs. This enables WHO to tailor advice and messages to help these stakeholders communicate the right messages to the audiences they interact with. Through this process, stakeholders amplify the right public health messages through established, trusted and recognized channels. Throughout 2020 WHO convened 60 technical webinars through EPI-WIN since January 2020, providing a channel for rapid information dissemination and a forum for participants to pose their own questions and shape the content of future webinars. Cumulatively, EPI-WIN COVID-19 live webinars have reached over 13 000 participants from 121 countries and territories.

The next goal for EPI-WIN is quantification of the extent and influence of information disseminated and consumed through the web, mass and social media, chat apps and other information channels. WHO is currently working with partners to develop a framework for an evidence-based, quantifiable understanding of the global COVID-19 conversation through an analysis of online platforms. This, in turn, will inform the development of analytical capabilities for the real-time monitoring of audience conversations about COVID-19. WHO already uses a digital listening approach, which quantifies, tracks and analyses trends in keywords and topics associated with COVID-19 in order to better understand infodemic trends. The evidence-based approach to infodemic management is still in its infancy, and there are many important questions that remain to be answered, such as how online behaviour affects offline action, how overwhelming amounts of information affect health-seeking behaviour, and how should we judge the relative success of policy interventions aimed at counteracting misinformation?

Ultimately, infodemics will be most effectively managed by empowering communities and institutions at a local and national level, and WHO is committed to rapidly strengthening this capacity. In October 2020 WHO partnered with Ryerson University’s Social Media Lab and the International Federation of Medical Students Associations (IFMSA) to develop open-source COVID-19 misinformation fact-checking tools. These tools are designed to help policy makers understand and counteract misinformation that poses a threat to health systems at a local level and include a COVID-19 fact-checkers data set is an international repository of more than 200 active COVID-19 fact-checking groups. The COVID Global Misinformation Dashboard enables users to access and search a catalogue of 3000 debunked COVID-19 claims based on the date a claim was made, what language the claim was made in, where the claim originated, and other data fields that offer insights into the nature of infodemics.

Ultimately, infodemics will be most effectively managed by empowering communities and institutions at a national level.
In November 2020 WHO held the first virtual infodemic management training programme, with over 270 participants coming together for eight training sessions over four weeks. The training gave participants a thorough grounding in infodemic management, including practical training on tools for monitoring rumours, fact-checking and verification, as well as learning how to respond effectively and testing interventions to slow down the spread of misinformation. The first session included an information crisis simulation, in which participants played the role of a public health communications officer in a major city during a fictional public health incident. The training was co-sponsored by the US Centers for Disease Control and Prevention, Africa Centres for Disease Control and Prevention and the Global Risk Communication and Community Engagement Collective Service.

Risk Communication and Community Engagement (RCCE) is both a technical pillar of the public health response to COVID-19 and a foundational way of working to enable other technical pillars such as surveillance to achieve their goals. The aim of RCCE is to:

- provide timely, relevant and actionable life-saving information through the most appropriate communication approaches to encourage people to adopt safe health practices and reduce fear, stigma and misinformation;
- listen to community feedback to understand the beliefs, fears, rumours, questions and suggestions communities have about COVID-19 and use this to guide the response – helping to ensure the accountability of the COVID-19 response;
- use innovative approaches to encourage behaviour change and take actions to prevent and reduce the spread of the disease;
- identify and support community-led solutions for bringing the outbreak under control.

Singapore’s COVID-19 response is a collective effort of stakeholders from businesses, the community, and government, including working with more than 5000 migrant ambassadors who engage with the migrant worker communities in their own languages. Pictured here, migrant workers attend a workshop to learn how to effectively wash their hands and wear masks as part of COVID-19 prevention measures.
Teams at the country level are able to adapt tools and guidelines to the contexts in which they work, and decide which tools, support and guidance is best suited to the specific needs in country.


The aim of the RCCE Collective Service is to ensure more consistent, systematic and predictable support to regional and national partners involved in the public health, humanitarian and development responses to the COVID-19 pandemic. By enhancing national, regional and global coordination, and ensuring that community feedback and insights collected across the response inform decision-making, both the quality and the consistency of RCCE approaches will be improved – building community trust and enhancing the effectiveness of the response. The Collective Service is the primary coordination forum for RCCE activities within the COVID-19 global response, providing priority guidance to help the regions and the countries in their response to the pandemic. There are RCCE working groups in each region that support national-level coordination mechanisms, which are typically led by the ministry of health and co-led by WHO, UNICEF, IFRC or another technical organization. Teams at the country level are able to adapt tools and guidelines to the contexts in which they work, and decide which tools, support and guidance is best suited to of the specific needs in country. By the end of 2020, 97% of 195 countries, territories and areas surveyed had a national COVID-19 risk communication plan: close to the target of 100% and a significant improvement on 19% reported in March 2020. However, that proportion falls to 89% when only the 64 priority countries, territories or areas are considered, with 81% of this subset reporting that they have mechanisms to capture and act on community feedback.

BOX 9
An intercultural health model in Colombia

Under current COVID-19 guidance, all communities across Colombia are obliged to cremate people when they die, but an exception has been made for the indigenous people of Alta Guajira. The Wayúu people’s beliefs and cultural practices around death are such that the Government will allow them to bury their dead underground or in a vault. The decision was made before COVID-19 reached the rural communities of Alta Guajira, who live in a vast desert of 8200 square kilometres in 22,000 scattered hamlets.

Following Government instructions to protect themselves against COVID-19 is difficult for people living in Alta Guajira. With temperatures at over 40° C, wearing masks, which are already scarce, is uncomfortable. There is not enough fresh water for people to wash their hands regularly, and it takes one hour on foot to reach water sources.

It was clear that the best way to reach the Wayúu people was through primary health care services, located close to home, that connect and appeal to their own culture. The department and the local health authorities agreed to promote primary health care adapted to the characteristics of the territory and the current situation, and with the effective participation of the community.

PAHO/WHO has supported local authorities to implement an “intercultural” health model with the Wayúu people. This initiative is supported by the UHC Partnership, which assists 115 countries in accelerating progress to achieve Universal Health Coverage (UHC) through funding provided by the European Union (EU), the Grand Duchy of Luxembourg, Irish Aid, the Government of Japan, the French Ministry for Europe and Foreign Affairs, the UK Department for International Development and Belgium.
Clinical management

Approximately 15% of patients with COVID-19 develop severe disease that requires oxygen support, and 5% have critical disease with complications such as respiratory failure, acute respiratory distress syndrome, sepsis and septic shock, thromboembolism, and/or multi-organ failure. WHO convened the first of many teleconferences with its clinical expert network on 9 January, and published its first guidance on the clinical management of patients with COVID-19 on 10 January. Since then, WHO has worked with expert networks (including EDCARN) and partners to develop the most up-to-date technical guidance for the clinical care of COVID-19 patients, and the design of critical case management infrastructure including intensive care units, based on an ongoing assessment of new evidence generated by the international community and first responders, and supported by the guideline development group. These guidelines are then rapidly translated into training courses and materials to be made available through OpenWHO and through the direct deployment of expert trainers at national and subnational levels.

Despite the global prevalence of COVID-19, our understanding of the severity, clinical features and prognostic factors of COVID-19 in different settings and populations remains incomplete. WHO has therefore encouraged 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.

At the national level, a key aspect of WHO’s support has been to expand and ensure access to essential respiratory equipment and supplies, including mechanical ventilators.
To harmonize data collection across diverse global settings, WHO has developed standard case report forms (CRFs) which contain a minimum set of key variables, and forms the basis of three types of CRF: a core rapid CRF for adults and children; a separate CRF for pregnant women; and a CRF for multisystem inflammatory syndrome in children and adolescents.

At the national level, a key aspect of WHO’s support has been to expand and ensure access to essential respiratory equipment and supplies, including mechanical ventilators, especially in low-income and middle-income countries (box 10). The WHO COVID-19 Essential Supplies Forecasting Tool is designed to help governments, partners, and other stakeholders to estimate potential requirements for essential supplies to respond to the current pandemic of COVID-19. WHO’s work to secure and deliver essential clinical supplies through the COVID-19 Supply Chain System is described in more detail below, but the procurement and logistical aspects of supply must also be backed up with rapid, on call technical expertise. To meet this need, WHO formed a panel to technical experts to provide rapid advice on all aspects of respiratory support for hospitalized patients.

The Respiratory Therapists Independent Experts Advisory Group has advised the WHO emergency and outbreak response team throughout 2020 in key areas including:

- innovative respiratory support technologies;
- appropriate clinical research methodologies relevant to respiratory therapy in COVID-19 clinical management;
- appropriate management of respiratory support techniques in patients with respiratory distress;
- mechanisms for improving access to medical oxygen and equipment in resource-constrained countries;
- specifications of mechanical ventilators and suitability for deployment in countries of need;
- training materials and modules aimed at improving the capacity of frontline healthcare workers in resource-constrained countries.

**BOX 10**

**Breathing life into the clinical management of COVID-19**

While the need for personal protective equipment in health facilities is well known, a less-publicized but equally vital resource is medical oxygen, which helps severely ill patients breathe and potentially avoid the need to be intubated.

The production and delivery of medical oxygen was a challenge worldwide even before the pandemic, as it is often left out of hospital budgets because demand for it can be difficult to predict.

In responding to COVID-19, WHO’s has procured and distributed oxygen supplies for vulnerable countries. By December 2020, WHO had sent more than 16 500 oxygen concentrators and 40 000 pulse oximeters and oxygen monitors to 121 countries. These devices will bring broader health benefits, such as to children with severe pneumonia, people undergoing surgery, and pregnant women.

WHO is also working with countries, such as Papua New Guinea, Ukraine, Somalia and South Sudan, on a more sustainable solution to rising demand: oxygen generation plants.

WHO verifies the oxygen cylinder supply at a health facility in Kutupalang refugee camp in Cox’s Bazar, Bangladesh.
Infection prevention and control

In the absence of medical countermeasures, infection prevention and control (IPC) measures are one of the most effective weapons we have to combat the spread of COVID-19. WHO developed rapid guidelines in January covering infection prevention with two main goals in mind:

- to prevent or stop the spread of COVID-19 infections during healthcare delivery in order to prevent health facilities from amplifying the disease, protect health workers and patients, and protect essential health services;
- to prevent or stop the spread of COVID-19 in public and private and community settings through a comprehensive package of individual and organizational/institutional prevention and control measures.

For healthcare settings, WHO has produced and regularly updated extensive guidance on what facilities should be doing to be prepared to respond to a case of an emerging respiratory virus such as the novel coronavirus, how to identify a case once it occurs, and how to properly implement IPC measures to ensure there is no further transmission to health workers or to other patients and others in the healthcare facility. Guidance also covers IPC considerations during home care for patients with suspected or confirmed COVID-19, the cleaning and disinfection of surfaces, and the rational use of personal protective equipment (PPE).

WHO advises the use of masks as part of efforts to limit the spread of COVID-19, and published guidance in June 2020, updated in December 2020, that sets out the scientific evidence relevant to the use of masks for reducing the spread of SARS-CoV-2, the virus that causes COVID-19, and practical considerations including:

- mask management;
- masking in health facilities in areas with community, cluster and sporadic transmission;
- mask use by the public in areas with community and cluster transmission;
- alternatives to non-medical masks for the public;
- exhalation valves on respirators and non-medical masks;
- mask use during vigorous intensity physical activity;
- essential parameters to be considered when manufacturing non-medical masks.

Much of the guidance related to the use of masks stems from new research commissioned by WHO. WHO has also worked extensively with partners to produce guidance on IPC in public settings such as schools and workplaces.

Acute shortages of vital PPE in the early stages of the pandemic led to widespread shortages, difficulties in procurement, and a rush to scale up alternative manufacturing capacity. In addition to playing a key role in the procurement and distribution of PPE to countries, WHO also produced and continues to update the key technical reference specifications on the quality, performance characteristics and related standards of PPE to be used in the context of COVID-19 including surgical masks, non-surgical masks, gloves, goggles, face shields, gowns and N95 masks.

WHO collaborates with hospitals around the world to prevent the spread of COVID-19 during healthcare delivery. The main goals are to prevent health facilities from amplifying the disease, protect health workers and patients, and protect essential health services.
Points of entry, travel and trade

All parts of the global economy have been severely affected by COVID-19, but no sector has been hit as hard as international travel and trade, and few sectors are as vital to the response. Moving large volumes of vital supplies from consolidation hubs to final destinations in countries has been made extremely difficult by the collapse in commercial transport worldwide. Most recently, WHO, as custodian of the International Health Regulations (2005), has worked urgently with all partners in order to ensure that transport corridors can be operated safely in support of the global response. In April 2020, the Directors-General of WHO, and the International Labour Organization and the Secretary-General of the International Maritime Organization issued a joint statement on medical certificates of seafarers, ship sanitation certificates (SSCs), and medical care of seafarers in the context of the COVID-19 pandemic.

Throughout 2020 WHO has worked closely with organizations representing aviation, maritime, trade, and tourism sectors to develop joint guidance, joint statements of support, monitor the measures taken by governments and private entities that impact international travel and trade, and to assess and mitigate the health and economic impact of such measures, in line with the provisions of the International Health Regulations (2005). WHO has worked closely with countries to strengthen capacities at points of entry (box 11).

**BOX 11**

**Strengthening points of entry in Bangladesh**

In the 6 months since the first case of COVID-19 was detected in Bangladesh, WHO, with financing from European Union Humanitarian Aid, has supported the government to screen nearly 1 million people entering the country by air, land, and sea.

Since the beginning of the pandemic, WHO has worked with the Government of Bangladesh, the International Organization for Migration (IOM), and other partners to implement passenger screening, early detection and isolation of suspected cases. WHO has supported the government to create a series of procedures and guidelines on detecting and screening ill passengers, isolating and quarantining contacts, and managing cases. In addition, WHO has supported enhanced data management and IPC. To protect frontline workers at points of entry, WHO has distributed 80 000 items of PPE such as masks, hand sanitizers, face shields, and gloves.
Protecting essential health services

COVID-19 has presented all countries and health systems with the challenge of an increase in the demand for care caused by COVID-19. Added to this increased demand, the response to the virus has often entailed limitations on movement, reduced staffing, and lowered capacity at health care facilities. At the same time, misinformation has often contributed to an increase in fear or a loss of trust in health systems, which can result in a significant change in health-seeking behavior amongst the general population. All of the above factors have the potential to severely disrupt the delivery of health care for all non-COVID-19 conditions.

WHO’s guidance Maintaining essential health services: operational guidance for the COVID-19 context was first published in March 2020 and was updated in June 2020. The guidance recommends practical actions that countries can take at national and local levels to maintain access to safe, high-quality, essential health services in the pandemic context. It also outlines sample indicators for monitoring the performance of essential health services during differing COVID-19 transmission scenarios. At the regional level, WHO has undertaken a major review of COVID-19 national response plans from all WHO regions to evaluate their alignment with the operational guidance outlined above, and has recommended actions for improvement that will be supported by regional and country offices.

WHO continues to closely monitor the impact of the pandemic on essential health services at the national level. In August 2020, WHO reported the results of a global pulse survey that described disruptions across all services and mitigation strategies to maintain essential health services through the life course. WHO is assisting Member States in fast-tracking actions to ensure continued delivery of essential health services in the context of COVID-19.

Even a temporary interruption to basic health-care services such as routine immunization services can lead to secondary health crises such as outbreaks of vaccine-preventable diseases, amplifying the long-term damage caused by COVID-19 and exacerbating morbidity and mortality. The latest data on vaccine coverage estimates from WHO and UNICEF for 2019 shows that improvements such as the expansion of the HPV vaccine to 106 countries and greater protection for children against more diseases are in danger. Preliminary data for the first four months of 2020, during which services are most likely to have been affected by COVID-19, points to a substantial drop in the number of children completing three doses of the vaccine against diphtheria, tetanus and pertussis (DTP3). This is the first time in 28 years that the world could see a reduction in DTP3 coverage – the marker for immunization coverage within and across countries.

Even a temporary interruption to basic health-care services such as routine immunization services can lead to secondary health crises such as outbreaks of vaccine-preventable diseases.
Vaccines can be delivered safely during the pandemic, and WHO is supporting countries to adapt immunization delivery strategies so that programmes can be conducted under safe conditions, without undue risk to health workers, caregivers, and the community (box 12). WHO guidance produced at the global level has been adapted and translated at the regional and national levels to tailor it to specific contexts, including fragile, vulnerable, and conflict-affected settings. WHO is also working at the national level to ensure the supply of essential medical supplies and personal protective equipment. In Syria, for example, WHO and UNICEF supported a 5-day national immunization campaign in June to close vaccination gaps among children. During the campaign, with infection, prevention and control measures in place, health workers vaccinated more than 210,100 children and reviewed the vaccination status of 900,000 children to determine the vaccines they still needed.

In fragile, conflict-affected, and vulnerable (FCV) settings such as Syria, emerging health emergencies such as COVID-19 can easily disrupt or overstretch already weak capacities for health service delivery. There is an absolute moral imperative to provide care and to meet the needs of populations in these settings. There is also a need, whilst acknowledging that protracted crises will continue for the foreseeable future, to reduce the risks to affected populations from health emergencies, and to increase the resilience of health services within FCV contexts.

As Health Cluster Lead Agency, WHO leads the efforts to integrate and deliver the public health response to COVID-19 through the GHRP, providing coordination and operational support in 30 countries in partnership with 900 national and international partners, to implement the GHRP and maintain essential health services addressing the needs of 63 million people. This task is streamlined by the Global Health Cluster COVID-19 Task Team, based at WHO headquarters, which identifies critical challenges and supports the adaptation and implementation of WHO COVID-19 guidance in low-capacity, humanitarian settings, and captures and disseminates good practice. The Global Health Cluster also co-leads the Global Information Management, Assessment and Analysis Cell, which manages and analyzes COVID-19-related information...
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The burden of a health emergency within a humanitarian crisis

Three years into the Rohingya Emergency Response in Cox’s Bazar, Bangladesh, under the coordination of WHO the health sector in providing health care to 860,000 Rohingya Refugees and 417,295 Bangladeshis living in the surrounding areas of the refugee camps. The size and density of the camp, coupled with the vulnerability of its population, mean a serious COVID-19 outbreak would have severe knock-on consequences for the entire health system. The health facilities run by health sector partners to provide services to the population include 38 primary health care centres, 97 Health Posts, and 23 special facilities and three field hospitals, all staffed by approximately 3500 health care workers.

Monitoring the provision of essential health services in the world’s largest refugee camps has been key to minimizing the impact of COVID-19 on the lives and well-being of the camp’s populations. A quarterly health facility monitoring system is undertaken to provide supportive supervision and issue guidance to all health facilities, and to monitor compliance with the Essential Minimum Service Package, including weekly inter-agency supportive supervision visits to camps.

Supportive supervisions to date have strengthened laboratories in the camps by improving biosafety and ensuring quality. An IPC assessment was carried out in 45 health facilities in the camps and government facilities, followed by training and supportive supervisions to address identified gaps. To date, IPC training has been provided to 1831 humanitarian health care workers and 814 government staff from implementing partners and government facilities, respectively. While reducing the risks of transmission among health care workers and patients, this culture of patient safety is also helping build trust in the health care system.

Ensuring essential health services in the world’s largest refugee camp

As part of WHO’s efforts to limit the impact of COVID-19 in the camp it has been essential to continue to treat people living with non-communicable diseases (NCDs), and prevent and control risk factors. WHO supports the Bangladesh Civil Surgeon Office to lead on NCD care coordination based on the WHO Package of Essential NCD Interventions, which includes capacity building of primary health care staff and community outreach workers, health promotion activities on NCD risk factors, supply of essential NCD commodities, and the strengthening of NCD surveillance and monitoring in the Cox’s Bazar district. As a result, 94% of primary health care facilities in Cox’s Bazar can manage diabetes, cardiovascular diseases, and chronic respiratory diseases: all of which can confer an increased risk of severe COVID-19.

Ensuring women’s rights to sexual and reproductive health

Balancing COVID-19 precautions with the need to maintain essential health service delivery is a challenge, but in area of women’s right to sexual and reproductive health care there is a clear imperative to ensure the continuity of the service. A total of 96,461 women of reproductive age in the camp are currently using methods of contraception, including long-acting reversible contraceptives, and family planning methods such as subcutaneous injectable contraception.

To meet the immediate sexual and reproductive health needs of vulnerable women, adolescents and girls in Cox’s Bazar, WHO is ensuring the availability of emergency reproductive health kits and other medical supplies at partner health facilities.

BOX 12

Ensure health services in the world’s largest refugee camp

WHO is supporting COVID-19 preparedness and response for vulnerable Rohingya refugees and host communities in Cox’s Bazar, Bangladesh.
Box 12 (continued)

Adapting routine immunization in response to COVID-19

Immunization is an essential health service that has been significantly affected by the COVID-19 pandemic. Disruption of immunization services, even for brief periods, will result in increased numbers of susceptible individuals, and raise the likelihood of outbreak-prone vaccine preventable diseases, such as measles.

Vaccines are especially important in the Rohingya refugee camps due to the densely populated camp. With no previous history of vaccination, the Rohingya people arrived in Cox’s Bazar with very low protection against vaccine-preventable diseases. The Government of Bangladesh, supported by WHO, UNICEF, and other health partners, launched the Routine Expanded Program of Immunization in Cox’s Bazar in July 2018, providing six vaccines against ten life-threatening diseases (diphtheria, whooping cough, influenza, tetanus, polio, tuberculosis, measles, rubella, hepatitis B and pneumonia), targeting children under 2 years of age and pregnant women.

In April 2020, immunization services in the refugee camps were halted due to the lockdown following the first COVID-19 positive cases among the host community. In response, the Government, WHO, and health sector partners developed a health-facility-based transitional strategy to resume routine immunization services at fixed and outreach immunization sites throughout the camps, with extra IPC precautions to limit the risk of transmission. WHO Health Field Monitors have monitored immunization sessions, and found that during the observed sessions, 97% of vaccinators were wearing facemasks, whilst 89% of caregivers were maintaining physical distancing to reduce the risk of COVID-19 infection. The immunization strategy for the camps is revised periodically to ensure vaccinations can continue despite fresh challenges to prevent outbreaks of other communicable diseases.

WHO is supporting COVID-19 preparedness and response for vulnerable Rohingya refugees and host communities in Cox’s Bazar, Bangladesh.
to support global decision-making, and provides technical support and services to prioritized countries.

Delivering for countries: global logistics and supply chains, and operational support

The COVID-19 pandemic delivered the biggest shock to global trade since World War II, and led to the total collapse of market mechanisms for many of the commodities vital to the response effort. A simultaneous surge in demand for personal protective equipment, medical supplies such as oxygen concentrators and respirators, and laboratory reagents and test kits coincided with significant disruption to international trade routes and manufacturing capacity. This perfect storm led to a scramble for commodities, wild price fluctuations, and increased the risk of poor quality equipment entering the marketplace that did not meet the correct technical specifications for its intended purpose.

The breakdown of normal market functioning for essential response commodities posed a huge challenge for the effective implementation of response pillars at national level in the first few months of the response. Clinical care, infection prevention and control, laboratory testing, and the safeguarding of essential health services all depend to a large extent on access to personal protective equipment, laboratory equipment and supplies, and essential medicines and equipment. The lack of a coordinated and equitable mechanism for purchasing and distributing essential response commodities on the basis of need, rather than the ability to pay, spurred the creation of the Supply Chain Task Force. The Task Force is co-chaired by WHO and WFP, and was convened to establish an integrated COVID-19 Supply Chain System (CSCS).

The Supply Chain Task Force includes representation from a broad range of participating organizations (WHO, WFP, UNICEF, OCHA, World Bank, The Global Fund, UNOPS, UNDP, UNFPA, UNHCR, NGOs, Red Cross and Federation and other cluster partners). The complementary core strengths of the Task Force members gives the CSCS enormous power as a complete end-to-end service that incorporates demand forecasting, technical specification and quality assurance, purchasing consortia to combine collective purchasing and areas of market expertise, and logistical knowhow and scale. The power of this system is put at the service of any approved stakeholder who has an active role in a national level COVID-19 preparedness and response action plan. These approved

WHO’s Health Emergencies Programme maintains a Logistics hub located within the International Humanitarian City in Dubai. The WHO/Dubai operation maintains over 17 000 square meters of temperature-controlled warehousing and manages an inventory of medicines, medical supplies, and equipment valued at US$ 40 million. Since the start of the COVID-19 pandemic, the WHO/Dubai operation has expanded to over four times its original size and has completed over 324 shipments to 108 destinations across all six WHO geographic regions.

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stakeholders can request supplies through the CSCS via the purpose built COVID-19 Supply Portal, which is available within the COVID-19 Partners Portal.

Since the launch of the COVID-19 Supply Portal, 228 requests for essential supplies have been submitted and validated at country-level by supply coordinators working on behalf of Resident Coordinators. More than 143 supply coordinators have been appointed from WHO and partner agencies, including UNICEF, WFP, the Office of the Resident Coordinator, UNDP and UNOPS. Together, supply coordinators have validated requests valued at over US$ 92 million (table 1), with more requests being submitted every day.

Maintaining the supply chain is a continual and dynamic process, which will take an extra dimension of complexity during 2021 as a new generation of rapid diagnostics become available, followed by the first generation of COVID-19 vaccines. Many of the vaccines are likely to present substantial additional challenges due to their requirements for a seamless cold chain from production facility to point of administration. Supporting the establishment a robust, resilient, and equitable distribution chain for these new technologies will require further evolution of the CSCS.

Maintaining the supply chain is a continual and dynamic process, which will take an extra dimension of complexity during 2021 as a new generation of rapid diagnostics become available, followed by the first generation of COVID-19 vaccines.

Table 4  Shipped items as of 31 December 2020

<table>
<thead>
<tr>
<th>Laboratory supplies</th>
<th>Personal protective equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antigen RDTs</td>
<td>Sample collection kitst</td>
</tr>
<tr>
<td>3 433 300</td>
<td>7 113 357</td>
</tr>
<tr>
<td>PCR tests</td>
<td>Face shields</td>
</tr>
<tr>
<td>15 709 426</td>
<td>30 884 121</td>
</tr>
<tr>
<td>Antigen RDTs</td>
<td>Gloves</td>
</tr>
<tr>
<td>8 464 831</td>
<td>1 445 967</td>
</tr>
<tr>
<td>PCR tests</td>
<td>Goggles</td>
</tr>
<tr>
<td>15 709 426</td>
<td>6 240 279</td>
</tr>
<tr>
<td>Antigen RDTs</td>
<td>Gowns</td>
</tr>
<tr>
<td>3 433 300</td>
<td>194 435 980</td>
</tr>
<tr>
<td>PCR tests</td>
<td>Medical Masks</td>
</tr>
<tr>
<td>15 709 426</td>
<td>19 580 165</td>
</tr>
<tr>
<td>Antigen RDTs</td>
<td>Respirators</td>
</tr>
<tr>
<td>3 433 300</td>
<td>15 709 426</td>
</tr>
</tbody>
</table>

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The COVID-19 Supply Portal has received 228 requests for essential supplies since its launch in 2020.
WHO’s R&D blueprint has been developed since 2016 in response to lessons learned from the west Africa outbreak of Ebola virus disease and other recent outbreaks, with the aim of strengthening coordination between scientists and global health professionals, accelerating the research and development process during emergencies, and catalysing research and innovation in preparation for future emergencies. Throughout 2020 those foundational efforts have provided the platform for the unprecedented scale of COVID-19 research and innovation efforts.

The unprecedented speed and unity of purpose that has characterized COVID-19 research has built on detailed preparatory work with national and regional regulators that has meant countries are primed to launch trials through streamlined emergency regulatory processes, with “disease X” trial protocols and target product profiles for therapeutics, vaccines, and diagnostics that were ready and waiting to be adapted to COVID-19.

The first point of departure for COVID-19 research and development efforts came on 10 January 2020, when the Global Coordination Mechanism for Research and Development to Prevent and Respond to Epidemics held its first teleconference, as did the Scientific Advisory Group for the R&D Blueprint. Those early discussions led to the first global forum of international scientists on COVID-19, at WHO’s Geneva headquarters on 11–12 February 2020.

After assessing what was known at the time about the new virus, the more than 400 international experts in attendance agreed on the critical thematic areas of research to prioritize, the mechanisms required to coordinate research to ensure no stone was left unturned, and the need for a framework to ensure that the most important research was funded efficiently. These discussions were synthesized in the COVID-19 Global research roadmap that set out nine key areas (see also box 13) to prioritize for accelerated research:

1. viral natural history, transmission and diagnostics;
2. virus origin, and management measures at the human-animal interface;
3. epidemiological studies;
4. clinical characterization and management;
5. infection prevention and control, including protection of health care workers;
6. candidate therapeutics;
7. candidate vaccines;
8. ethical considerations for research;

BOX 13
Spurring innovation in Africa

A WHO study has found that of 1000 new or modifications of existing technologies that have been developed worldwide to target different areas of the COVID-19 response, Africa accounts for 13% of these innovations. The response areas include surveillance, contact tracing, community engagement, treatment, laboratory systems and infection prevention and control.

In Africa, 57.8% of the technologies were ICT-driven, 25% were based on 3D printing and 10.9% were robotics. The ICT-based innovations include WhatsApp Chatbots in South Africa, self-diagnostic tools in Angola, contact tracing apps in Ghana and mobile health information tools in Nigeria. The countries with the most innovations were South Africa (13%), Kenya (10%), Nigeria (8%) and Rwanda (6%).

Earlier this year, all 47 African Member-States in the WHO African Region adopted a WHO strategy for scaling up health innovations in Africa. By 2023, 80% of all Member States agreed to perform needs assessments to identify critical gaps in their health systems and establish coordination mechanisms to scale up innovations.

The WHO Regional Office for Africa has created a global database of innovations to share knowledge, ideas and successes, and has set up a COVID-19 technology access pool to share intellectual property and data. The inaugural WHO health innovation challenge, which aimed to tackle some of the most pressing health needs of the world’s most vulnerable populations, included 2400 entries, including from 44 African countries.

“COVID-19 is one of the most serious health challenges in a generation, but it is also an opportunity to drive forward innovation, ingenuity and entrepreneurship in life-saving health technologies,” said Dr Matshidiso Moeti, WHO Regional Director for Africa. “It’s great to see the youthful energy of the continent fired up to fight COVID-19. Solar-powered automatic handwashing tools, mobile applications that build on Africa’s rapidly growing connectivity. These home-grown innovations are uniquely adapted to the African context.”
### Progress against *Global research roadmap*

#### Transmission
- WHO laboratory and biosafety guidance, and diagnostic strategy for testing in resource-constrained settings
- Landscape analysis of diagnostic assays, in development/available
- Studies of viral shedding during acute infection

#### Human-animal interface
- Investigation of replication and excretion of COVID-19 in fur farms in China: negative result.
- Investigation of replication and excretion of COVID-19 from pets in contact with human cases: ongoing
- Investigation of susceptibility of pets and livestock: ongoing

#### Epidemiology
- Core protocols developed for four early sero-epi investigations and one environmental investigation, under the Unity study umbrella
- Epidemiological studies using one or several of the core Unity protocols have been started in 31 countries

#### Clinical management
- Clinical management protocol developed.
- Protocols developed to assess transmission through aerosol/high-flow oxygen
- Global anonymized clinical data platform developed for rapid collection of relevant clinical data

#### Health workers and infection prevention and control
- Systematic reviews of evidence informing IPC guidance for the COVID-19 response, such as the effectiveness of medical masks versus respirators for health worker protection; physical distancing; utility of universal mask use in public and in health care facilities.
- Research on optimal features and characteristics of non-medical masks, including choice of fabric, number and combination of layers, shape, and coating – this research informed WHO updated guidance on masks.
- Researched efficacy and safety of decontamination and re-use methods for masks and respirators.
- Developed protocol for case-control study to assess risk factors for COVID-19 in health workers.

#### Therapeutics
- Landscape analysis of therapeutics
- Treatment master protocol developed
- Solidarity trial launched and expanded.
- Agreements finalized with five manufacturers of medicines included in the Solidarity trial

#### Vaccines
- Landscape analysis of vaccine candidates
- Master protocol developed for phase 2b/3 trials
- Target product profile produced for COVID-19 vaccines

#### Ethics
- Key ethical concepts paper published
- Policy briefs produced on ethics of research for COVID-19; ethics of resource allocation and equitable access; ethics of restrictive measures

#### Social sciences
- Review of psychosocial impacts of COVID-19
- Review and key lessons of health protection policies
- Research into impacts of quarantine on contraception, HIV treatment access, delivery modes and quality of SRH care
- Research protocol development and research implementation on health care worker perceptions of infection prevention and control procedures
- Toolbox on Good Participatory Practice for COVID-19 clinical trials and Working with Community Advisory Boards for COVID-19 related clinical trials
- Development of rapid reviews on the social, cultural, behavioural considerations on the use of face coverings; immunity passports; and home care

#### Coordination
- *Global research roadmap* published
- Framework for coordinated investment in research developed
integrating social sciences in the outbreak response.

The forum also discussed a framework for coordinated investment that fed into the formation of the ACT-Accelerator, which was established in April and is described in more detail below.

A second Global Forum on COVID-19 Research and Innovation was convened by WHO in July 2020, during which over 1000 participants took stock of the progress that had been made towards meeting the goals of the Global research roadmap, and reviewed priorities for further research.

This third part of the report explores the progress that has been made in key areas of research, including vaccines, diagnostics, and therapeutics, looks at how the ACT-Accelerator is helping the world to prepare for the equitable roll out of new technologies, and highlights the key WHO initiatives that are supporting the world’s scientific community to build the evidence base needed to guide effective public health policy.

In relation to this final point, which is intrinsically linked to WHO’s role in the formulation of normative guidance during the response, WHO continually gathers and catalogues newly published international scientific findings and knowledge on COVID-19 in multiple languages as a resource for researchers. The global literature indexed in the WHO COVID-19 database is updated daily via searches of bibliographical databases, hand searching, and through expert referrals. The WHO evidence retrieval sub-group has begun collaboration with key partners to build a more comprehensive database. The database is built by BIREME, the Specialized Center of WHO/PAHO, and part of the Regional Office’s Department of Evidence and Intelligence for Action in Health. WHO also supports the COVID-19 living Network Meta-Analysis initiative, which enables users to easily visualize what research is underway across the world (figure 20).

Figure 20 The COVID-19 living Network Meta-Analysis

The COVID-19 living Network Meta-Analysis initiative has so far gathered and analysed data from 2202 studies of treatments from WHO’s International Clinical Trials Registry Platform. 1231 of these trials are currently recruiting patients. The initiative produces a living map of ongoing research in order to identify gaps in real time.

Source at: https://covid-nma.com/dataviz/
Therapeutics

While the search for an effective treatment for COVID-19 continues, WHO has cautioned against giving unproven treatments to patients with COVID-19 until there is sufficient evidence of benefit. On 18 March, in order to increase the chances of finding a safe and effective treatment in the shortest possible time, WHO launched the Solidarity Trial – a large international clinical trial to help find an effective treatment for COVID-19 and, equally importantly, rule out candidate therapeutics that do not confer clinical benefit. Enrolling patients into one large randomized multi-centre trial overcomes the risk of multiple small trials being unable to generate the strong evidence needed to determine the relative effectiveness of potential treatments to international standards. The enrolment of more patients, across international sites with COVID-19 transmission, gives the world the best chance of obtaining a statistically significant result in as short a time as possible across as broad a group of trial candidates as possible.

The trial protocol is designed so that more treatments can be added as promising candidates graduate from earlier stages of clinical development. On its launch, the Solidarity trial compared four treatment options with standard care, aiming to discover whether any of the treatments were able to slow disease progression or improve survival. The treatments were Remdesivir; Lopinavir/ Ritonavir; Lopinavir/ Ritonavir with Interferon beta-1a; and Chloroquine or Hydroxychloroquine.

By October 2020, over 12 000 patients were recruited in 500 participating hospitals in 30 countries, with 43 countries approved to begin recruiting. Overall, 116 countries in all six WHO regions have joined or expressed an interest in joining the trial. Each participating country is a sponsor to the trial in its country and supports its implementation, including financially. WHO is actively supported the:

- identification of hospitals participating in the trial;
- training of hospital clinicians on the web-based randomization and data system;
- shipping the trial drugs as requested by each participating country.

On 15 October 2020 the Solidarity Trial published interim results. It found that all four of the treatments evaluated (remdesivir, hydroxychloroquine, lopinavir/ritonavir and interferon) had little or no effect on overall mortality, initiation of ventilation, nor duration of hospital stay in hospitalized patients. The only treatments so far found to have a significant clinical benefit in terms of reduced mortality are corticosteroids, after results were reported from a number of well-designed studies in the summer of 2020 following the recommendations of the Global research roadmap. Based on the findings from seven trials, WHO issued interim guidance in September 2020 stating that WHO strongly recommends that corticosteroids (i.e. dexamethasone, hydrocortisone or prednisone) be given orally or intravenously for the treatment of patients with severe and critical COVID-19.

The Solidarity Trial is now evaluating other treatments for inclusion, to continue the search for effective COVID-19 therapeutics. Newer antiviral drugs, immunomodulators, and anti-SARS CoV-2 monoclonal antibodies are under consideration as candidates for trial. The results to date are proof that large international trials are possible in the midst of a pandemic, and offer the statistical power to quickly and reliably answer critical public health questions during a health emergency. In 2021, the evidence produced by the Solidarity Trial will be essential to guide the therapeutics that are made available through the therapeutics pillar of the ACT-Accelerator.

The results to date are proof that large international trials are possible in the midst of a pandemic, and offer the statistical power to quickly and reliably answer critical public health questions during a health emergency.
Diagnostics

The COVID-19 pandemic has created an urgent need to rapidly increase testing services to support efforts to control the spread of COVID-19 and effectively treat patients. Since January 2020 many hundreds of new tests have been marketed to detect COVID-19, with limited or no independent data on their performance. Countries have faced challenges in the appropriate selection and effective deployment of molecular and serological diagnostics, and most recently antigen-detecting rapid diagnostic tests (Ag-RDTs).

Several Ag-RDTs for SARS-CoV-2, usually in a lateral flow immunoassay (LFI) cassette format, have recently been developed and commercialized. These simple-to-use tests offer the possibility of rapid case detection, especially of the most infectious patients in the first week of illness, at or near the point of care. However, performance can be highly variable based on the test characteristics and the population tested, with sensitivity dropping markedly in patients without a high viral load.

WHO has worked with other key stakeholders to defined minimum performance specifications for point of care Ag-RDTs in a Target Product Profile. Using these criteria WHO has approved several Ag-RDTs for emergency use listing, and reached an agreement with partners and manufacturers to make 120 million tests available for use in low-income and middle-income countries.

WHO has produced interim guidance on the use of Ag-RDTs for SARS-CoV-2, featuring important considerations for implementation. In December 2020 WHO also launched the SARS-CoV-2 Ag-RDT training package: a structured comprehensive collection of training resources and tools for relevant institutions to organize, run and evaluate training of trainers and/or training of health workers who will be performing SARS-CoV-2 testing using Ag-RDTs. Materials can be adapted and customized based on national guidelines, delivery modality and target group of participants. However, as yet there is limited experience with Ag-RDTs tests in routine settings.

WHO is therefore sponsoring a multi-country, multi-site program to monitor the implementation of Ag-RDTs for COVID-19 to assess field performance, acceptability, feasibility and/or impact and inform and optimize settings for most effective utilization. In November 2020 WHO issued a call for proposals to participate in the monitoring of Ag-RDTs in low-income and middle-income countries to better understand field performance, acceptability, feasibility, cost-effectiveness and impact of these tests.

Vaccine development

Safe and effective vaccines for COVID-19 will be powerful tools in the global effort to control the COVID-19 pandemic. Since January WHO has worked with international partners to coordinate and accelerate the research and development, manufacture, and regulatory evaluation of vaccines at a scale that has never been attempted before. In the final quarter of 2020 the world saw the first evidence that these efforts had born fruit with the approval of a number of vaccines by national regulatory authorities.

The pace of this progress, advancing in less than 12 months from the discovery of a new pathogen to a vaccine with emergency authorization for use in humans, forces us to rethink what it is possible in global health when we find the urgency, political will, resources, expertise, and spirit of collaboration to act with such focus in pursuit of a global good. With that same degree of commitment we must now approach the formidable challenge of having every safe and effective vaccine approved, manufactured, distributed, and made available to everyone across the world on the basis of risk and need. This process will require meticulous planning and negotiation, and a marshaling of our collective resources. It will also require patience: it is unlikely that enough vaccines will be available in 2021 to have a significant impact on global transmission. At the same time, we must maintain our commitment to ensuring that as many of the most promising of the more than 200 candidates still in development have the best chance of success. WHO will continue its work across a number of key areas to ensure that each of these goals are realised throughout 2021.

WHO has shipped more than 5 million test kits during 2020 to support national laboratories.
Defining the desired characteristics of safe and effective vaccines to combat the pandemic

To guide the efforts of vaccine developers, WHO has drawn up a Global Target Product Profiles for COVID-19. This document outlines the minimum and desired attributes of safe and effective vaccines. The TPPs cover two types of vaccines: vaccines for the long-term protection of people at higher risk of COVID-19 such as healthcare workers; and vaccines for use in response to outbreaks with rapid onset of immunity. These profiles are essential as we evaluate which of the more than 210 candidates in development to prioritise for clinical testing.

WHO has also coordinated expert consultations to identify the potential role of different animal models and laboratory assays to evaluate and screen candidate vaccines before their evaluation in humans.

Mapping candidate vaccines and their progress across the world

As of December 2020 there are over 210 candidate vaccines in development, with at least 48 candidate vaccines in human trials. Of the vaccines in human trials, about 10 are in phase III trials, and three have so far announced the successful completion of phase 3 trials. WHO continues to undertake regular landscape analyses of all candidates in development. WHO is also fostering regular open dialogue between researchers and vaccine developers to expedite the exchange of scientific results, debate concerns, and propose rapid and robust methods for vaccine evaluation.

WHO Solidarity Vaccine Trial

The Solidarity Trial for COVID-19 therapeutics was able to deliver conclusive results in record time because of its global scope. WHO has proposed and designed a similar approach for the comparison of vaccines. WHO’s expert group on immunization has designed a large international randomized controlled clinical trial, the WHO Solidarity Vaccines Trial, which aims 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. High enrolment rates facilitated by flexible trial design and hundreds of study sites in high-incidence locations will yield results on short-term efficacy for each vaccine within just a few months of including that vaccine. Preparations are complete to initiate the trial in at least 15 trial sites in January 2021, with an anticipated enrolment rate of 200 patients per site per week.

WHO expert groups are also considering:

• criteria to prioritize which vaccines should go into Phase 2 and 3 clinical trials;
• a Phase 2b/3 protocol that can be used by all vaccine developers to shape their trial, which will enable real-time evaluation of the benefits and risks of each promising candidate vaccine.

The pace of this progress ... forces us to rethink what it is possible in global health.

WHO has worked with international partners to coordinate and accelerate the research and development, manufacture, and regulatory evaluation of vaccines at a scale that has never been attempted before.
Ensuring access and preparing health systems – the ACT-Accelerator

As safe and effective vaccines, therapies, and diagnostics become available, it is vital that they are accessible to everyone who needs them. WHO will continue to work throughout 2021 to align research and development, fast-track regulatory approvals, harness manufacturing, and work with funders so that all populations in all countries can access the tests, treatments and vaccines the world needs. One of the main vehicles for achieving this goal is the ACT-Accelerator.

Launched at the end of April 2020, at an event co-hosted by the Director-General of the World Health Organization, the President of France, the President of the European Commission, and the Bill & Melinda Gates Foundation, the ACT-Accelerator brings together governments, scientists, businesses, civil society, philanthropists, and global health organizations (the Bill & Melinda Gates Foundation, CEPI, FIND, Gavi, The Global Fund, Unitaid, WHO, and the World Bank) to accelerate development, production, and equitable access to COVID-19 tests, treatments, and vaccines.

The ACT-Accelerator is organized into three pillars of work: diagnostics, treatment, vaccines, plus health system strengthening through the cross-cutting health systems connector. Each pillar is vital to the overall effort and involves innovation and collaboration. Underpinning all of these pillars is the Access and Allocation workstream led by WHO, which is is developing the principles, framework and mechanisms needed to ensure the fair and equitable allocation of new COVID-19 technologies.

Of all the technologies under development, vaccines have arguably the most important role to play in ending the acute phase of the pandemic. The COVAX Facility forms a key part of the vaccine pillar of the ACT-Accelerator, and is co-led by Gavi, the Coalition for Epidemic Preparedness Innovations (CEPI), and WHO, working in partnership with developed and developing country vaccine manufacturers. COVAX aims to accelerate the development and manufacture of COVID-19 vaccines, and to guarantee fair and equitable access for every country in the world by sharing the risks associated with vaccine development, by investing in manufacturing upfront so vaccines can be deployed at scale as soon as they are proven successful, and by pooling procurement and purchasing power to ensure the delivery of sufficient volumes of vaccine to end the acute phase of the pandemic during 2021.

The principal role of the COVAX Facility is to maximize the chances of people in participating countries getting access to COVID-19 vaccines as quickly, fairly and safely as possible. By joining the Facility, participating countries and economies will not only get access to the world’s largest and most diverse portfolio of COVID-19 vaccines, but also an actively managed portfolio. The Facility continually monitors the COVID-19 vaccine landscape to identify the most suitable vaccine candidates, based on scientific merit and scalability, and works with manufacturers to incentivize them to expand their production capacity in advance of vaccines receiving regulatory approval.

Funding is a crucial part of ensuring the roll out of vaccines to all countries as they become available, but there is also a huge amount of work to be done to prepare health systems and distribution chains for the safe and coordinated administration of any vaccine. Throughout 2020 WHO has rapidly developed guidelines and is working intensively with countries to strengthen readiness for COVID-19 vaccines.

In December 2020 the WHO Vaccine Country Readiness and Delivery workstream released guidance on developing a national deployment and vaccination plan (NDVP) for COVID-19 vaccines. This guidance is intended to help countries develop their plan for COVID-19 vaccine introduction. A Vaccine Readiness Assessment Tool (VIRAT) has also been developed for use by Ministries of Health, with support from WHO and UNICEF country offices. The VIRAT provides a roadmap for countries to plan for COVID-19 vaccine introduction and a structured framework for countries to self-monitor their readiness progress against key milestones.

Other resources in development include guidance and tools on: planning for COVID-19 vaccine acceptance and demand; managing the supply, logistics, and distribution; monitoring vaccination; and conducting an evaluation of the vaccine introduction. COVID-19 vaccination training packages will include a blend of online learning modules, materials for in person trainings, and job aides. Initial training packages will focus on health workers and the national/sub-national focal points for COVID-19 vaccine introduction.
LOOKING AHEAD TO NEW CHALLENGES IN 2021

We started 2020 never having heard of COVID-19. We end 2020 with more than 1.5 million lives lost to the disease, a pandemic that is still accelerating in some parts of the world, and a global population that in some places is growing frustrated and fatigued by the public health response to the virus. The challenges ahead of us in 2021 will pose as stern a test as anything we have faced so far in this pandemic. But if we can meet those challenges the potential rewards are enormous.

Although the epidemiological situation that confronts us in the first quarter of 2021 is grave, we are now forearmed with the knowledge and, increasingly, the tools that will enable us to plot a course out of the pandemic. WHO has massively and rapidly scaled its emergency response platforms to support countries around the world to put their own response plans into action, and we have seen that when countries have based those plans on WHO’s guidance they have been able to reduce the transmission of SARS-CoV-2, save lives, and protect the vulnerable.

In 2021 we must carry forward our hard-won knowledge, integrate new tools such as vaccines into the response, and marry them to the political will to act in a spirit of multilateralism and solidarity to ensure that WHO is able and empowered to support every country to adapt and deliver their national COVID-19 action plans on the basis of a new global Strategic Response Plan.

WHO’s COVID-19 response plan for 2021 adapts the original pillars of WHO’s COVID-19 strategy to incorporate the lessons that we have learned during 2020 in order to address the key emerging challenges that will define our collective progress against COVID-19 over the next 12 months.

The first challenge is to strengthen and sustain the evidence-based public health and social measures that have been shown to control the virus, but that have not yet been applied consistently on a global, regional, and national scale. In the near and medium term, all countries will continue to be faced by the same core public health challenges: how to control transmission of the SARS-CoV-2 virus; how to provide care to COVID-19-infected individuals at different levels of existing health systems; and how to protect essential health services. For all countries in 2021, the answers to these questions will continue to be through the use of context-appropriate public health and social measures. A robust system for testing, isolating and treating cases, and tracing and quarantining contacts will remain the key to controlling transmission and the backbone of the COVID-19 public health response for at least the next 12 months. Prepared health systems, staffed by protected and trained health workers with access to the knowledge and treatments they need, will reduce mortality from all causes. We know what works. A key challenge for WHO will be to support countries to more accurately gauge and report their own capacities for implementation, and provide targeted support for rapid ameliorative action where gaps are identified. Addressing this challenge will be particularly important in FCV contexts, in which COVID-19 health strategies must be adapted to context-specific and evolving needs, with an increasing focus on reducing all-cause excess morbidity and mortality.

FCV contexts are also particularly important when we come to consider the third core public health challenge faced by all countries: the protection of essential health services. The relevant pillars of the 2021 strategy will address the evolving challenge at national level and subnational level to balance measures that prevent the direct morbidity and mortality attributable to COVID-19, the indirect morbidity and mortality caused by the overwhelming of health systems and the interruption of other essential health and social services, and the acute and long-term detrimental effects on health, including mental health, and wellbeing of the socioeconomic consequences of some response measures. As the pandemic has progressed so has our appreciation of the importance of that balance, and the complexity inherent in attaining it amidst a highly dynamic situation.

The challenges ahead of us in 2021 will pose as stern a test as anything we have faced so far in this pandemic.
The second major challenge facing countries, WHO, and the global response during 2021 is how best to integrate new technologies into the response in the most efficient and effective way, and to do so in such a way that strengthens health systems for the future.

The authorization in December 2020 by some national regulators of several vaccines against COVID-19 for emergency use was a watershed moment, and on 31 December 2020 WHO listed the Comirnaty COVID-19 mRNA vaccine for emergency use, making the Pfizer/BioNTech vaccine the first to receive emergency validation from WHO.

Safe and effective vaccines will be powerful tools in the global effort to control the COVID-19 pandemic, but the scale of work required to realize, and in many ways understand, the potential of this first generation of COVID-19 vaccines to change the course of the pandemic cannot be overstated. The first critical hurdle to overcome is that of access, and it is a challenge that can be overcome through the COVAX pillar of the ACT-Accelerator. COVAX is the only mechanism that can ensure vaccines will be available worldwide, and that is the only way to ensure that the pandemic is brought to an end. COVAX will be fully funded and enabled to meet its target of securing and delivering 2 billion vaccine doses by the end of 2021. For this ambitious plan to be successful, we must continue to accelerate the work that was started in 2020 to prepare health systems in all countries to address the logistical and public health challenges of what will be the most complex vaccination effort in history.

The degree to which health systems are ready and prepared to integrate new technologies such as vaccines and rapid diagnostics will ultimately determine the rate at which the world is able to control the pandemic. COVID-19 has exposed systemic weaknesses in global and national health systems and health security mechanisms. The need to invest in health system capacities to both control COVID-19 through existing measures and to implement a COVID-19 vaccination presents us with a generational opportunity, and a moral obligation, to ensure that these investments have a lasting benefit in terms of our collective global health security, and result in an enduring improvement in the health and prosperity of societies. Ending the COVID-19 pandemic means controlling transmission in every country and in every context, no matter how challenging. Ultimately we will bring about that control through an evolving combination of vaccination, other new tools, and public health and social measures, all of which will require investment in health system capacities that are foundational for both health security, for universal health coverage, and for primary care.

A coherent approach to strengthening health systems must be woven into the COVID-19 response that develops inter-dependent and integrated capacities for comprehensive surveillance, data and information systems, regulation, communication and planning/oversight capacities, and risk management within essential health services. Throughout 2020, WHO and partners have supported countries to strengthen and adapt health systems during the COVID-19 pandemic. One of the overarching challenges of 2021 will be to ensure that these investments are consolidated and built upon to ensure that we not only end the pandemic in every country, but that we build a healthier, more sustainable, and more secure future. WHO’s GPW13 provides the principles and the framework to build a healthier and safer world; if we can stay true to those principles in our response to the global emergency of COVID-19, we can ensure that it is a tragedy that leaves a legacy of positive change.

It will be important to ensure that the response protects health and wellbeing in the broadest sense, including the incorporation of mental health and psychosocial support as an integral component in many aspects of the COVID-19 response, from case management and risk communication and community engagement to the strengthening of essential health services.
## ANNEX A:
Overview of COVID-19 SPRP monitoring and evaluation

### Country/area-level coordination, planning and monitoring

- **Countries/areas with COVID-19 National Plan**: 91%
- **Countries/areas with a functional multi-sectoral, multi-partner coordination mechanism for COVID-19 preparedness and response**: 97%
- **Countries/areas that put in place at least one social and physical distancing measure related to schools or offices in the context of COVID-19**: 99%
- **Countries/areas reporting having at least one mass gathering event affected by COVID-19, following a risk assessment exercise**: 36%

### Risk communication and community engagement

- **Countries/areas which have a national COVID-19 risk communication and community engagement plan**: 97%
- **Priority countries/areas where a RCCE coordination mechanism is active and formally implemented**: 89%
- **Priority countries/areas that have mechanisms in place to capture community feedback**: 81%

### Surveillance, rapid response teams and case investigations

- **Countries/areas implementing seroepidemiological investigations or studies**: 70%
- **Countries/areas testing for COVID-19 and reporting routinely through established sentinel or non-sentinel ILI, SARI, ARI surveillance system**: 100%
- **Priority countries/areas where the IMST has a focal point for contact tracing implementation and training**: 23%

### Points of Entry (PoE)

- **Countries/areas which produce and distribute messages and PoEs for both travelers and staff working at the PoE facilities and conveyances**: 27%
- **Countries/areas in which all designated PoE have public health emergency contingency plans**: 63%

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Data as of 8 January 2021

22 January 2021
Looking back at a year that changed the world: WHO’s response to COVID-19
Looking back at a year that changed the world: WHO’s response to COVID-19

### National laboratories
- Countries/areas with COVID-19 laboratory test capacity: 100% (Baseline value), 85% (Target value)
- Countries/areas participating in WHO External Quality Assessment Project (EQAP): 85% (Baseline value), 15% (Target value)
- Countries/areas scoring 100% on EQAP: 95% (Baseline value), 5% (Target value)

### Infection prevention and control (IPC)
- Countries/areas that have a national IPC programme and WASH standards within all healthcare facilities: 39% (Baseline value), 15% (Target value), 45% (Baseline value), 100% (Target value)
- Countries/areas with Long-Term Care Facilities (LTCF) that have a national policy and/or guidelines on IPC for COVID-19 in LTCFs: 44% (Baseline value), 7% (Target value), 31% (Baseline value), 19% (Target value)
- Priority countries/areas where the IMST has as focal point for IPC training: 83% (Baseline value), 16% (Target value)

### Case management
- Countries/areas that have clinical referral system in place to care for COVID-19 cases: 37% (Baseline value), 89% (Target value)

### Operational support and logistics
- Number of medical masks (3 plies) shipped to priority countries by WHO: 113 119 480
- Number of laboratory testing kits shipped to priority countries by WHO: 2 457 222
- Priority countries/areas where at least one IMST team member has been trained in the use of Essential Supply Forecast Tool: 52% (Baseline value), 48% (Target value), 100% (Baseline value)

### Maintaining essential health services and systems
- Countries/areas that have defined essential health services to be maintained during COVID-19 pandemic: 46% (Baseline value), 20% (Target value), 34% (Baseline value), 100% (Target value)
- Priority countries/areas where at least one VPD immunization campaign was affected (suspended or postponed, fully or partially) by COVID-19: 0% (Baseline value), 27% (Target value)

### Cross-cutting issues
- Priority countries/areas with multi-sectoral mental health and psychosocial support technical working group: 80% (Baseline value), 6% (Target value), 14% (Baseline value), 100% (Target value)
- Countries/areas that have national occupational safety and health plans or programmes for health workers: 28% (Baseline value), 6% (Target value), 67% (Baseline value), 100% (Target value)

Data as of 8 January 2021

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22 January 2021

Looking back at a year that changed the world: WHO’s response to COVID-19

52
Table 5 Contributors to the SPRP

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Looking back at a year that changed the world: WHO’s response to COVID-19

## Table 5  Contributors to the SPRP (continued)

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The COVID-19 Member-State Pooled Fund is a subset of all COVID-19 Strategic preparedness and response plan (SPRP) funding and enables WHO to deliver on its mandate to implement the priority actions outlined in the SPRP. The pooled Fund enables Member States to pool their contributions into a single, flexible fund that can be used immediately to support countries. It facilitates rapid action by WHO through increased flexibility administrative processes, and delivers efficiency and value for money.

### Table 6: Contributors to the Member States COVID Pool

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