

# PAN AMERICAN HEALTH ORGANIZATION RESPONSE TO COVID-19 IN THE AMERICAS



January - December 2020

**PAHO**



Pan American  
Health  
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REGIONAL OFFICE FOR THE  
Americas

**Pan American Health Organization Response to COVID-19 in the Americas. January–December 2020**

PAHO/IMS/PHE/COVID-19/21-0010

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# Contents

Abbreviations .....	IV	Colombia .....	83
Introduction .....	1	Costa Rica .....	85
Epidemiological Situation Analysis .....	3	Cuba .....	87
North America Subregion .....	6	Dominica .....	89
Central America Subregion .....	6	Dominican Republic .....	91
South America Subregion .....	7	Dutch Island Territories .....	93
Caribbean Subregion .....	7	Ecuador .....	95
Health Systems Situation Analysis .....	7	El Salvador .....	97
PAHO's Regional and Country Response to COVID-19 .....	10	French Departments .....	99
Laying the Groundwork for COVID-19 Vaccination .....	13	Grenada .....	100
Pillar 1. Country-level Coordination, Planning, and Monitoring .....	19	Guatemala .....	102
Pillar 2. Risk Communication and Community Engagement .....	24	Guyana .....	105
Pillar 3. Surveillance, Rapid Response Teams, and Case Investigation .....	28	Haiti .....	107
Pillar 4. Points of Entry, International Travel, and Transport .....	34	Honduras .....	109
Pillar 5. National Laboratories .....	36	Jamaica .....	111
Pillar 6. Infection Prevention and Control .....	41	Panama .....	113
Pillar 7. Case Management .....	44	Paraguay .....	115
Pillar 8. Operational Support and Logistics .....	50	Peru .....	117
Pillar 9. Maintaining Essential Health Services during the Pandemic .....	54	Mexico .....	120
Research, Innovation, and Development .....	58	Nicaragua .....	122
The Road Ahead .....	62	Puerto Rico .....	123
COVID-19 Country Reports .....	63	Saint Kitts and Nevis .....	124
Antigua and Barbuda .....	64	Saint Lucia .....	126
Argentina .....	66	Saint Vincent and the Grenadines .....	128
Bahamas .....	68	Suriname .....	130
Barbados .....	70	Trinidad and Tobago .....	132
Belize .....	72	United Kingdom Overseas Territories .....	134
Bolivia (Plurinational State of) .....	74	Uruguay .....	136
Brazil .....	77	Venezuela (Bolivarian Republic of) .....	137
Chile .....	80		

# Abbreviations

<b>ACT-A</b>	Access to COVID-19 Tools Accelerator	<b>CIEVS</b>	Strategic Health Surveillance Information Center (Brazil)
<b>AEFI</b>	Adverse Events Following Immunization	<b>CIMPA</b>	International Center for Pure and Applied Mathematics (Costa Rica)
<b>Ag-RDT</b>	Antigen-based Rapid Diagnostic Tests	<b>CME</b>	Continuing Medical Education
<b>AISEM</b>	Health and Medical Equipment Infrastructure Agency (Bolivia)	<b>CML</b>	Central Medical Laboratory (Belize)
<b>AMC</b>	Advance Market Commitment	<b>CNE</b>	National Commission for Risk Prevention and Emergency Response (Costa Rica)
<b>AMCS</b>	Alternative Medical Care Sites	<b>COMISCA</b>	Council of Ministers of Health of Central America
<b>ARVs</b>	Antiretrovirals	<b>COVID-19</b>	Coronavirus Disease
<b>BDF</b>	Belize Defence Force	<b>CRD</b>	Country Readiness and Delivery Workstream
<b>BMDA</b>	Belize Medical Dental Association	<b>CRUEM</b>	Regulatory Center for Medical Emergencies (Bolivia)
<b>BRISA</b>	Regional Database of Health Technology Assessment Reports of the Americas	<b>CVIC</b>	Vaccine Introduction and Deployment Costing Tool
<b>CARICOM</b>	Caribbean Community	<b>CYTED</b>	Ibero-American Program for Science and Technology for Development
<b>CARPHA</b>	Caribbean Public Health Agency	<b>DG</b>	Director-General
<b>CDC</b>	Centers for Disease Control and Prevention	<b>DIGEMID</b>	General Directorate for Medicines, Supplies, and Drugs (Peru)
<b>CDEMA</b>	Caribbean Disaster Emergency Management Agency	<b>DIGIESP</b>	General Directorate for Strategic Public Health Interventions (Peru)
<b>CEASS</b>	Center for Health Provisions and Supplies (Bolivia)	<b>DPSPE</b>	Department of Health Promotion and Environmental Protection (Haiti)
<b>CEN CINAI</b>	National Education and Nutrition Centers and Comprehensive Care Child Centers (Costa Rica)	<b>EAPV</b>	Post-Vaccine Adverse Events
<b>CENARES</b>	National Center for Strategic Health Resources Supplies (Peru)	<b>EBS</b>	Event-Based Surveillance
<b>CENETROP</b>	National Center for Tropical Diseases (Bolivia)	<b>ECLAC</b>	Economic Commission for Latin America and the Caribbean
<b>CENOC</b>	National Center for Community Organizations (Argentina)	<b>EIOS</b>	Epidemic Intelligence from Open Sources
<b>CEPI</b>	Coalition for Epidemic Preparedness Innovations	<b>EMS</b>	Emergency Medical Services
<b>CFR</b>	Case Fatality Rate	<b>EMT</b>	Emergency Medical Team
<b>CHW</b>	Community Health Worker	<b>EOC</b>	Emergency Operations Center
<b>CIEGES</b>	Strategic Information Center for State Management (Brazil)	<b>ESAVI</b>	Events Supposedly Attributable to Vaccination or Immunization

## Abbreviations

<b>EUL</b>	Emergency Use Listing
<b>FAO</b>	Food and Agriculture Organization
<b>FAQ</b>	Frequently Asked Questions
<b>FIND</b>	Foundation for Innovative New Diagnostics
<b>FLOD</b>	First Line of Defence
<b>GBV</b>	Gender-Based Violence
<b>GISAID</b>	Global Initiative on Sharing All Influenza Data Platform
<b>HRH</b>	Human Resources for Health
<b>HTAs</b>	Health Technology Assessments
<b>IAFA</b>	Institute on Alcoholism and Drug Dependence (Costa Rica)
<b>IBS</b>	Indicator-Based Surveillance
<b>ICAFE</b>	Costa Rican Coffee Institute
<b>ICAO</b>	International Civil Aviation Organization
<b>ICGES</b>	Gorgas Memorial Institute for Health Studies (Panama)
<b>ICTRP</b>	International Clinical Trials Registry Platform
<b>IGSS</b>	Guatemalan Social Security Institute
<b>IHR</b>	International Health Regulations
<b>IMAS</b>	Joint Institute for Social Assistance (Costa Rica)
<b>IMST</b>	Incident Management System Team
<b>INAMU</b>	National Institute for Women (Costa Rica)
<b>INLASA</b>	National Institute of Health Laboratories (Bolivia)
<b>IOM</b>	International Organization for Migration
<b>IVD</b>	In Vitro Diagnostics
<b>JRF</b>	WHO/UNICEF Joint Reporting Form
<b>KHMH</b>	Karl Huesner Memorial Hospital (Belize)
<b>LAC</b>	Latin America and the Caribbean
<b>LACEN</b>	Central Public Health Laboratory of Amazonas (Brazil)
<b>MDR</b>	Multi-drug Resistant Tuberculosis

<b>MFA</b>	Ministry of Foreign Affairs
<b>mhGAP</b>	WHO Mental Health Gap Action Program
<b>MHPSS</b>	Mental Health and Psychosocial Support
<b>MINSAP</b>	Ministry of Public Health (Cuba)
<b>MIS</b>	Multisystem Inflammatory Syndrome
<b>MOH</b>	Ministry of Health
<b>MOHW</b>	Ministry of Health and Wellbeing
<b>MPEA</b>	Ministry of People Empowerment and Elder Affairs (Barbados)
<b>MPTF</b>	Multi-Partner Trust Fund
<b>MSP</b>	Ministry of Public Health
<b>MSPAS</b>	Ministry of Health and Social Assistance (Guatemala)
<b>MSPP</b>	Ministry of Public Health and Population (Haiti)
<b>MTSS</b>	Ministry of Labor and Social Security (Costa Rica)
<b>NASG</b>	Non-Pneumatic Anti-Shock Garment
<b>NCD</b>	Noncommunicable Disease
<b>NDVP</b>	National Deployment and Vaccination Plan
<b>NEMO</b>	National Emergency Management Organization (Belize)
<b>NGS</b>	Next Generation Sequencing
<b>NICs</b>	National Influenza Center
<b>NIP</b>	National Immunization Program
<b>NITAG</b>	National Immunization Technical Advisory Group
<b>NRA</b>	National Regulatory Agency
<b>OESH</b>	Occupational and Environmental Safety and Health
<b>OIE</b>	World Organization for Animal Health
<b>ORAS</b>	Andean Health Agency
<b>PAHO</b>	Pan American Health Organization
<b>PAHOERC</b>	PAHO Ethics Review Committee
<b>PHC</b>	Primary Health Care

## Abbreviations

<b>PHEIC</b>	Public Health Emergency of International Concern	<b>SIPAE</b>	Information System for Emergency Prevention and Response (Costa Rica)
<b>POE</b>	Points of Entry	<b>SISMED</b>	Unified Emergency and Disaster System (Peru)
<b>PPE</b>	Personal Protective Equipment	<b>SISVEFLU</b>	Influenza Surveillance System (Mexico)
<b>PRAIS</b>	Regional Platform on Access and Innovation for Health Technologies	<b>SISVER</b>	Respiratory Diseases Surveillance System (Mexico)
<b>PSA</b>	Public Service Announcement	<b>SNS</b>	National Health Services (Dominican Republic)
<b>RCC</b>	Regional Review Committee	<b>SOPs</b>	Standard Operating Procedures
<b>RCCE</b>	Risk Communication and Community Engagement	<b>SPRP</b>	Strategic Preparedness and Response Plan for COVID-19
<b>RCO</b>	United Nations Resident Coordinator Office	<b>SRA</b>	Stringent Regulatory Authority
<b>RDT</b>	Rapid Diagnostic Test	<b>SUMA</b>	PAHO/WHO Supply Management System
<b>REC</b>	Research Ethics Committee	<b>TAG</b>	Technical Advisory Group
<b>RedETSA</b>	Regional Health Technology Assessments Network	<b>UKOT</b>	United Kingdom Overseas Territories
<b>RENASMIC</b>	National Comprehensive and Community Mental Health Care Network (Bolivia)	<b>ULV</b>	Ultra Low Volume
<b>RHAs</b>	Regional Health Authorities (Trinidad and Tobago)	<b>UNICAMP</b>	University of Campinas in Brazil
<b>RIVM</b>	Netherlands National Institute for Public Health and the Environment	<b>UNICEF</b>	United Nations Children's Fund
<b>SAG</b>	Agricultural and Livestock Service (Chile)	<b>UNODC</b>	United Nations Office on Drug and Crimes
<b>SAGE</b>	Strategic Advisory Group of Experts on Immunization	<b>UWI</b>	University of the West Indies
<b>SARI/ILI</b>	Severe Acute Respiratory Illness / Influenza-like Illness	<b>VCE</b>	PAHO Essential Conditions Assessment Tool
<b>SARS</b>	Sever Acute Respiratory Syndrome	<b>VIGEPES</b>	National Epidemiological Surveillance System for El Salvador
<b>SARS-CoV-2</b>	Severe Acute Respiratory Syndrome Coronavirus 2	<b>VIRAT</b>	COVID-19 Vaccine Introduction Readiness Assessment Tool
<b>SDG</b>	Sustainable Development Goals	<b>VOC</b>	Variants of Concern
<b>SEDES</b>	Department Health Services (Bolivia)	<b>VRAF</b>	Vaccine Readiness Assessment Framework
<b>SERUMS</b>	Rural and Urban Health Service Act (Peru)	<b>WASH</b>	Water, Sanitation, and Hygiene
<b>SFC</b>	Self-Financing Countries	<b>WHO</b>	World Health Organization

# Introduction

Following an outbreak of a novel coronavirus (COVID-19) in Wuhan City, Hubei Province, China, rapid community, regional, and international spread occurred across the globe, with exponential growth in the number of cases and deaths. On 30 January 2020, the Director-General (DG) of the World Health Organization (WHO) declared the COVID-19 outbreak a public health emergency of international concern (PHEIC), under the International Health Regulations (IHR) (2005). The first case in the Americas was confirmed in the United States of America on 20 January 2020, followed by Brazil on 26 February 2020. Since that time, COVID-19 has spread to all 54 countries and territories in the Americas. By 31 December 2020, the WHO Region of the Americas led in the number of confirmed cases and deaths worldwide.<sup>1</sup>

In mid-January 2020, the Pan American Health Organization (PAHO) activated an organization-wide response to support all countries and territories in the Region to address and mitigate the impact of the COVID-19 pandemic. Working through its regional

and country incident management system teams (IMST) in Latin America and the Caribbean, PAHO provides direct emergency response to ministries of health and other national authorities to scale up their readiness and response operations, supporting the improvement of surveillance, testing, and laboratory capacity; preparing and strengthening health services; infection prevention control; clinical management; and risk communication, in alignment with the WHO COVID-19 Strategic Preparedness and Response Plan<sup>2</sup> (during this reporting period, an update of the WHO Plan was under way) and PAHO's Response to COVID-19 Outbreak in the Region of the Americas: Response Strategy and Donor Appeal.<sup>3</sup>

PAHO has developed, published, and disseminated evidence-based technical documents to help guide countries' strategies and policies to manage this pandemic. It has collaborated with partners in the Region and across the globe to deliver technical cooperation, evidence-based guidance, and recommendations, and to advocate for the Americas on the global stage.

1 As at 31 December 2020, the top 10 countries worldwide with the highest number of reported cases are: United States of America, India, Brazil, Russian Federation, France, United Kingdom, Turkey, Italy, Spain, and Germany. World Health Organization: Coronavirus Disease (COVID-19) Dashboard. Available online at: <https://covid19.who.int>.

2 WHO Strategic Preparedness and Response Plan for COVID-19. Available online at: <https://www.who.int/publications/i/item/strategic-preparedness-and-response-plan-for-the-new-coronavirus>.

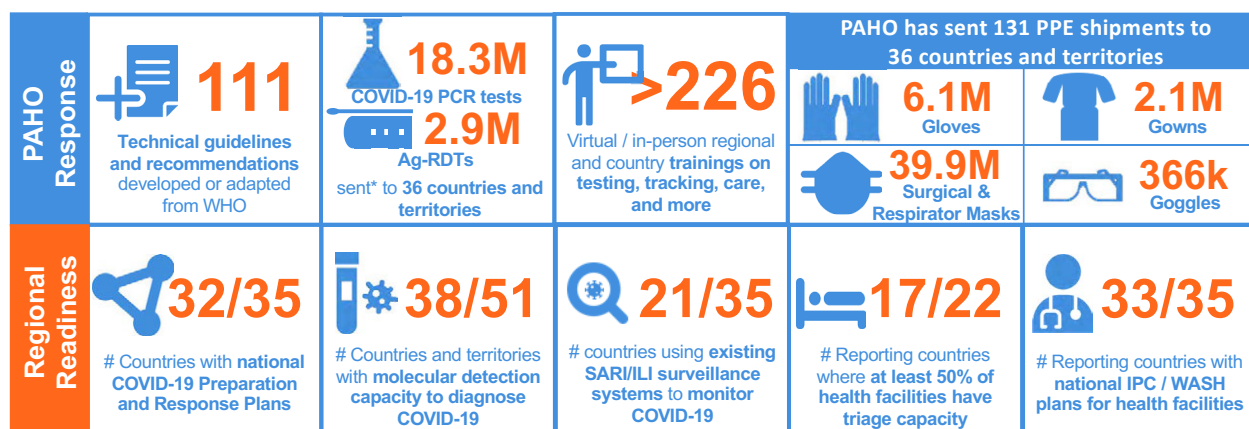
3 Response to COVID-19 Outbreak in the Region of the Americas. Response Strategy and Donor Appeal. August 2020. Available online at: <https://www.paho.org/en/documents/response-covid-19-outbreak-region-americas>.

This report updates earlier versions on PAHO's response to the COVID-19 pandemic, which were published in June and September 2020 respectively, through the end of 2020, unless otherwise noted.<sup>4</sup> It documents PAHO's efforts from the earliest days of the pandemic, when the Organization rapidly mobilized its experts, shipped needed laboratory supplies for molecular detection of the virus, and acted rapidly to prepare the Region's national laboratories to test for COVID-19. This groundwork has been essential to prepare the Americas for new circumstances, such as genomic surveillance for new variants of concern.

Earlier in 2020, PAHO played a critical role in procuring PPE (which was in short supply) to support

national efforts to combat COVID-19. Since then, the marketplace for PPE and other critical supplies has stabilized. Meanwhile, global efforts to find a safe and effective vaccine proved successful and PAHO shifted much of its focus to its work with countries to develop national plans for the arrival and distribution of vaccines.

The section that follows presents an updated picture of the epidemiological situation in the Americas and the impact of the spread of the virus on health systems in Latin America and the Caribbean. It includes selected highlights of PAHO's work in the countries and territories. Epidemiological data are presented for the first quarter of 2021 (unless indicated otherwise).



Source: Summary of key figures related to the Response to COVID-19 in the Americas, 21 December 2020. Available online at: <https://www.paho.org/en/documents/covid-19-pahowho-response-report-39-21-december-2020>.

4 Pan American Health Organization Response to COVID-19 in the Americas. Available online at: <https://www.paho.org/en/documents/pan-american-health-organization-response-covid-19-americas-0>.

# Epidemiological Situation Analysis

As at 8 March 2021, the Region of the Americas reported a cumulative total of 51,694,320 cases, including 1,242,308 deaths from COVID-19. These figures account for almost 44% of the 116,521,281 cases and 48% of the 2,589,548 deaths reported globally. This Region has the highest number of reported cases and deaths among all six WHO Regions (followed by the European Region, which reported 39,892,674 cases and 885,846 deaths).

Cases in the Region of the Americas reached a peak during the week of 3 January 2021, when 2,522,305 new cases were reported, primarily from the United States of America (71%). Since then, a declining trend in cases was observed until the week of 21 February 2021, when slight weekly increases were observed again, driven by increasing cases in Brazil. Similarly, the weekly death toll peaked during the week of 24 January 2021 when 47,277 new deaths

## The Region of the Americas reporting of COVID-19 as at 8 March, 2021



51,694,320 cases

44% of the 116,521,281 cases globally

1,242,308 deaths

48% of deaths reported globally

were reported in the Region, mostly from the United States of America (48%), Mexico (19%), and Brazil (16%). Since then, the overall decreasing trend in weekly deaths continues, except in Brazil where the weekly number of deaths have also been increasing, along with the cases.

Of all COVID-19-reported cases and deaths in the Region as at 8 March 2021, the United States of America accounts for 55% of cases and 42% of deaths, while Brazil accounts for 21% of cases and 21% of all deaths. Together, these two countries account for 76% of all cases and 63% of deaths currently reported in the Americas. Countries reporting the highest proportions of new deaths between 1 September 2020 and 8 March 2021 are the United States of America (44%, 338,589 deaths); Brazil (19%, 143,497 deaths); and Mexico (16%, 9~91,12 deaths).

The pooled crude case fatality estimate (number of reported deaths divided by the number of reported cases) in the Region is 2.4%.<sup>5</sup> The median country-specific estimate is 1.5%, with an interquartile range of 0.7%-2.5%. Table 1 shows the 15 countries in the Region reporting the highest number of cases. Regionally, there is little difference between sexes with regard to the number of cases, with 51% of cases being female. However, in terms of deaths, men account for 60% of deaths. In the 20-59 year-old age range, 67% of deaths occur in men; for people over 60 years of age, 60% of the deaths are in men. As at 8 March 2021, according to available information from 31 countries, a total of 1.28 million cases of COVID-19, including 24,592 deaths, have been reported among

healthcare workers. Of these, 72% are female, and the age groups with the highest proportions of confirmed cases are 30-39 years and 40-49 years.<sup>6</sup>

In Latin America and the Caribbean, indigenous and Afro-descendant communities have historically faced inequalities. Their lower incomes, lower levels of education, and other disadvantaged social determinants of health, compounded with their reduced access to health services, geographic barriers, discrimination, and stigma, make these populations particularly vulnerable to COVID-19 infection and mortality.

While precise data on these populations are not always available, reports have shown that the impact on indigenous populations is not homogenous. From the beginning of the COVID-19 pandemic in the Americas through 22 August, 93,622 confirmed cases, including 1,893 deaths (2.0%), were reported among indigenous peoples or communities in 11 countries for which information was available.<sup>7</sup> Comparing data available as at 21 August 2020 with the data published in the PAHO/WHO Epidemiological Update from 5 August 2020, the highest relative increase in the number of cases has been observed among the indigenous peoples of Colombia, followed by Ecuador and Brazil. With regard to the number of deaths, the highest relative increase has been observed in Ecuador, followed by Colombia. Available data indicate that the three highest numbers of confirmed cumulative cases in indigenous nations or indigenous communities by country were reported in the United States of America (39,051), followed by Brazil (21,142) and Peru (11,182).<sup>8</sup>

5 Pan American Health Organization. Epidemiological Alert: COVID-19 among health workers - 31 August 2020; Available online at: <https://www.paho.org/en/documents/epidemiological-alert-covid-19-among-health-workers-31-august-2020>.

6 Pan American Health Organization. COVID-19 Sex Differences in the Americas, Epidemiological Update: Coronavirus disease (COVID-19), 11 March 2021. Available online at: <https://www.paho.org/en/documents/covid-19-sex-differences-americas>.

7 Pan American Health Organization. Epidemiological Update: Coronavirus disease (COVID-19) - 26 August 2020; available at: <https://www.paho.org/en/documents/epidemiological-update-coronavirus-disease-covid-19-26-august-2020>.

8 Ibid.

Many of these already vulnerable populations are employed in the informal economy, which has been hard hit as public health measures, such as lockdowns, have been put in place. The additional stressors on their livelihoods are compounding food insecurity and impacting their access to health, communication,

and transportation services. PAHO, through its country offices and in partnership with the national health authorities, is conducting risk assessments and an analysis of vulnerabilities, capacities, and exposures of these vulnerable populations.

**Table 1: Cumulative cases, deaths, and crude case fatality rates (CFR%) among the 15 countries/territories reporting the highest number of cumulative cases as at 8 March 2021<sup>9</sup>.**

Country/Territory	Cases	Deaths	CFR (%)
United States of America	28,700,966	521,625	1.8%
Brazil	11,019,344	265,411	2.4%
Colombia	2,276,656	60,503	2.7%
Argentina	2,154,694	53,121	2.5%
Mexico	2,128,600	190,604	9.0%
Peru	1,371,176	47,854	3.5%
Canada	886,574	22,239	2.5%
Chile	860,533	21,163	2.5%
Panama	344,834	5,923	1.7%
Ecuador	294,503	16,039	5.4%
Bolivia (Plurinational State of)	254,273	11,823	4.6%
Dominican Republic	243,526	3,179	1.3%
Costa Rica	206,640	2,833	1.4%
Guatemala	178,770	6,479	3.6%
Honduras	173,729	4,260	2.5%

<sup>9</sup> Op. cit., 31 August 2020.

## North America Subregion

The North America subregion, which consists of Canada, Mexico, and the United States of America, accounts for 61% of the total cases and 59% of the total deaths reported as at 8 March 2021 in the Americas. Of the approximately 9.6 million new cases, including the almost 236,000 new deaths reported in the subregion in the prior two months (January–February 2021), the majority of the new cases were reported by the United States of America (90%), followed by Mexico (7%) and Canada (3%). With regards to new deaths, approximately 72% were reported by the United States of America; 25% by Mexico; and 3% by Canada. All three countries reported community transmission, per the WHO classification for COVID-19 transmission category. Overall, the weekly notifications of cases at the national level have been on a downward trend for six consecutive weeks in all three countries. The overall weekly death toll has also been decreasing in all three countries for the past two weeks.

## Central America Subregion

Of the almost 235,000 new cases reported during January and February 2021, the majority were reported by Panama (42%), Honduras (20%), Guatemala (16%) and Costa Rica (16%). The same four countries also made up the majority (89%) of new deaths reported in the subregion, with Panama accounting for the highest proportion (33%), followed by Guatemala (28%), Honduras (18%), and Costa Rica (11%). As at 8 March, all seven countries in this subregion continue to report community transmission, per the WHO classification for COVID-19 transmission category. Overall, the daily notification of cases and deaths have been decreasing in almost all countries of the Central American subregion since the end of February 2021.



Photos: © PAHO

In coordination with UNHCR and the IOM, PAHO provided technical support and guidance to Colombia to reduce the risk of COVID-19 among migrant populations in the country, as well as work to jointly prioritize their health needs. PAHO, 10 November 2020

## South America Subregion

Following North America, South America remains the subregion with the highest number of confirmed cases and deaths reported through 8 March 2021. The subregion's 10 countries have reported a combined total of more than 18.5 million cases, including more than 479,500 deaths, more than three times the number of cases and twice the number of deaths since the last report on 31 August 2020 (~15.6 million cases, including ~186,000 deaths). All 10 countries, including Uruguay, have now reported community transmission – Uruguay previously reported clusters of cases. Of the 4.8 million new cases reported in the January–February 2021 period, Brazil accounts for the highest proportion of cases (60%), followed by Colombia (13%), Argentina (10%), and Peru (6%). Similarly, of the more than 104,000 new deaths, the highest proportions were reported by Brazil (58%), Colombia (16%), Argentina (8%), and Peru (8%).

## Caribbean Subregion

The Caribbean and Atlantic Ocean Islands subregion reported more than 541,000 COVID-19 cases, including 7,950 deaths as at 8 March 2021. This represents a 250% and 216% increase in cases and deaths respectively. This represents a 230% and 123% increase in cases and deaths, respectively. Of the nearly 170,000 cases reported in the past two months (January – February 2021), majority were reported from the Dominican Republic (40%), Cuba (22%), and Puerto Rico (14%). The Dominican Republic reported the highest proportion of new deaths in the prior two months (39% of the total 1,773 new deaths), followed by Puerto Rico (30%) and Cuba (10%). Of the 36 countries and territories in this sub-region, 50% (18/36) are now reporting community transmission, 42% (15/36) are reporting sporadic or clusters of cases, and 8% (3/36) are not reporting any cases. The countries and territories not reporting any cases as at 8 March are Saint Barthelemy, Saint Pierre and Miquelon, and Sint Eustatius.

# Health Systems Situation Analysis

PAHO supported more than 579 hospitals (public and private) in 20 countries<sup>10</sup> to carry out a COVID-19 Readiness Self-assessment. The results indicated a moderate level of preparedness in some key areas, such as laboratory diagnosis of SARS-CoV-2 virus, isolation, and case management. Scores were lowest in areas related to the care of patients requiring critical care and the availability of equipment and supplies

for medical care (including PPE and ventilators). Epidemiological projections indicated that countries were still facing the threat of their health systems network reaching maximum capacity for care. Preparedness activities, therefore, focused on the reorganization and expansion of health services to meet needs created by an exponential increase in the number of patients. Travel restrictions provided

<sup>10</sup> Argentina, Bolivia (Plurinational State of), Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, United States of America, and Venezuela (Bolivarian Republic of).

an additional challenge, as international emergency medical teams—which can provide essential medical surge functions—could not be deployed.

Countries have begun reorganizing their first levels of care to respond to the pandemic. In the Region, 20 of 24 countries that reported have incorporated the first level of care into the COVID-19 response.<sup>11</sup> COVID-19-related actions carried out at the first level of care included education and communication (67%); case investigation and contact tracing (63%); triage (63%); testing (42%); referral (54%); and follow up of cases and contacts in the community (54%).<sup>12</sup> In addition, key actions<sup>13</sup> related to the continuity of essential services included the care of pregnant women (58%) and newborns (54%); immunizations (63%); dispensation of medications (42%); and monitoring of patients with chronic conditions by tele-consultation

or home care (71%). Routine immunization services were maintained in 22 (67%) of 33 countries reporting to the PASB immunization survey in 2020. Despite shortages, there has been no interruption of treatment for HIV, thanks to mitigation measures implemented by countries and territories, including support from PAHO through the Strategic Fund.

COVID-19 has affected the continuity of essential services provided at the first level of care, especially in peri-urban and rural areas, and among indigenous populations, due to the already existing deficit of health teams, social distancing measures, infected staff, and the closure of various primary care facilities. Outpatient services for noncommunicable diseases (NCD) continue to be maintained, but with limited access in 18 countries (64%), and completely open in seven countries (25%).<sup>14</sup>

11 Argentina, Bahamas, Belize, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Honduras, Guatemala, Guyana, Jamaica, Mexico, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay, and Venezuela (Bolivarian Republic of).

12 Op. cit., dated in May 2020.

13 Op. cit., dated in May 2020.

14 Rapid Assessment of COVID-19 Impact on NCD Programs in the Region of the Americas. 4 June 2020.

<https://www.paho.org/en/documents/rapid-assessment-covid-19-impact-ncd-programs-region-americas>.



Other challenges to health services at country level include gaps in human resources and a lack of incentives; difficulties in connectivity; shortages of medicines, supplies, medical devices, PPE and logistics to carry out case investigation and contact tracing; testing, triage, home care; and management of call centers and teleconsultations. The main reasons for disruption of services related to noncommunicable diseases include cancelation of elective care services (58%); clinical staff being reallocated to the COVID response (50%); and patients not presenting (50%).<sup>15</sup> To date, all Member States have put in place measures to reorganize and expand hospital capacity to respond to COVID-19, including decisions to integrate national capacity for critical care; the centralized management of beds (repurposing, retrofitting, and upgrading); strengthening clinical management within the network for the continuity of care; and efficient use of hospital resources. An analysis of eight countries (Brazil, Chile, Colombia, Dominican Republic, Ecuador, Mexico, Panama, and Peru) indicates an increase of 99.7% in critical beds between March and end of July (46,928 to 93,700 beds). In addition, as at 31 August, 22 countries reported 158 national EMTs deployed; and 189 alternative medical care sites (AMCS) are

operational, providing a total of 14,613 inpatient beds and 1,657 critical care beds. Initiatives that focused on using stadiums and mobile hospitals as AMCS, which in some cases have prioritized increasing the number of beds over the capacity for patient care, have resulted in a shortage of qualified staff and in limited self-sufficiency for the effective delivery of clinical care.

The availability and safety of healthcare workers has been a critical factor in the expansion of health services. Many countries have promulgated legal and normative tools to manage human resources for health (HRH), with some declaring COVID-19 an occupational disease. Approaches to expand HRH capacities included: using health sciences students to support contact tracing; issuing temporary contracts and increasing the number of permanent contracts; establishing bilateral arrangements with other countries; authorizing temporary licensing, on an exceptional basis, for health professionals who received their degree in another country; and accelerating the graduation of residents and students in their final year of studies. Some countries have also provided economic and non-economic incentives for personnel responding the pandemic.

<sup>15</sup> Op. cit., dated May 2020.

# PAHO's Regional and Country Response to COVID-19

The Organization's work to date falls under the following nine pillars of WHO's global Strategic Preparedness and Response Plan for COVID-19.



safe and efficacious vaccine. In anticipation for the introduction of COVID-19 vaccines, PAHO worked closely with its Member States to facilitate equitable access and prepare for successful rollout.<sup>17</sup> This report outlines the Organization's work in each of the nine strategic pillars as well as work jointly undertaken to support the Region to build and reinforce country preparedness for the timely and equitable distribution of COVID-19 vaccines in 2021.

17 WHO incorporated technical cooperation pertaining to vaccines for COVID-19 into a tenth pillar following the 2021 publication of its COVID-19 Strategic Preparedness and Response Plan (SPRP 2021). 24 February 2021.  
This document is available at this link: <https://www.who.int/publications/i/item/WHO-WHE-2021.02>.

11



A dose of a COVID-19 vaccine is administered to a member of Brazil's indigenous populations. SESAI (Brazil), 18 March 2021

# Laying the Groundwork for COVID-19 Vaccination

## The Global Landscape

As countries mobilize efforts towards vaccinating their populations against COVID-19, concerted efforts are required to ensure all countries have timely and equitable access and are ready to receive and deliver COVID-19 vaccines. In April 2020, WHO and its partners launched the Access to COVID-19 Tools Accelerator (ACT) as an integrated solution to end the COVID-19 pandemic on a global level. The COVAX Facility is the vaccines pillar of the ACT Accelerator and is co-led by the Coalition for Epidemic Preparedness Innovations (CEPI), Gavi, the Vaccine Alliance, and WHO, along with UNICEF; in the Americas, the PAHO Revolving Fund is the recognized procurement agent for COVAX.

The COVAX Facility was launched in June 2020 to accelerate the development, manufacturing, and delivery of COVID-19 vaccine doses, while guaranteeing fair and equitable access for every country in the world, regardless of income level. Vaccines obtained through the Facility would be quality assured, either by WHO (being listed on WHO's Emergency Use Listing (EUL) or through the prequalification process) or, under exceptional circumstances, by a Stringent Regulatory Authority (SRA).

Recognizing that the vaccine supply would remain limited at least through at least 2021, WHO published the 'Fair Allocation Mechanism for COVID-19 Vaccines through the COVAX Facility'<sup>18</sup> in September 2020, thus establishing the mechanism to allocate vaccines among countries. The aim of COVAX is to see that

participating countries receive doses to cover up to 20% of their population to protect public health while minimizing societal and economic impact by reducing COVID-19 mortality.

## Streamlined Coordination and Collaboration

In this context, and with the vision of ensuring that every eligible person in the Americas receives a COVID-19 vaccine as soon as feasible, PAHO's Director established the Task Force for COVID-19 Vaccination in the Americas in September 2020. The Task Force provides strategic, technical, and operational guidance for the successful planning and rollout of COVID-19 vaccinations in the Region.

PAHO leveraged existing global and regional advisory bodies to ensure that actions taken in the Americas are aligned with evidence-based recommendations. PAHO shared the Region's briefings and country readiness progress with the WHO-convened Strategic Advisory Group of Experts (SAGE) on Immunization, a global group convened to issue policy recommendations. In 2020, PAHO twice convened its Technical Advisory Group (TAG) on Vaccine-preventable Diseases to guide the regional adaption of SAGE recommendations for policy and country readiness for COVID-19 vaccination, and to issue recommendations for maintaining and strengthening national immunization programs (NIPs) amidst the ongoing pandemic.

<sup>18</sup> Available online at: <https://www.who.int/publications/m/item/fair-allocation-mechanism-for-covid-19-vaccines-through-the-covax-facility>.

PAHO worked with global partners WHO, UNICEF, and Gavi through global coordination groups such as the Country Readiness and Delivery (CRD) workstream<sup>19</sup> to drive the development of streamlined guidance, training, and approaches that better respond to country needs as they introduce COVID-19 vaccines.

## PAHO's 2020 Response

### Ensuring Equitable Access

In September 2020, PAHO's 58th Directing Council urged Member States to advance with their national preparatory plans to introduce COVID-19 vaccines. Critically, the Council designated the PAHO Revolving Fund for Access to Vaccines as the most suitable mechanism for providing equitable access to COVID-19 vaccines in the Region.<sup>20</sup> This decision was made based on the Revolving Fund's 41 years of experience facilitating the Member States' access to vaccines, the trust it has earned securing quality-assured vaccines at affordable prices, and its extensive expertise as the lead agency for procuring vaccines for the Americas.

With this mandate, the Revolving Fund was also designated to serve as a procurement agency for COVID-19 vaccines on behalf of the 10 countries eligible for Advance Market Commitment (AMC) financing<sup>21</sup> and the 28 self-financing countries (SFC),<sup>22</sup> part of the COVAX portfolio in the Americas. Countries that have negotiated agreements directly with

manufacturers of COVID-19 vaccine candidates or expect to receive donations from other countries are also eligible to participate in COVAX. PAHO was the sole agency, aside from UNICEF, to receive a mandate to procure COVID-19 vaccines from the COVAX Facility. In November 2020, PAHO launched a global tender, together with UNICEF, to procure COVID-19 vaccines for countries forming part of the COVAX portfolio.

Additionally, the Organization worked closely with countries to navigate the COVAX country participation requirements, including indemnification and liability requirements, estimates of needs for syringes and other supplies, and the finalization of procurement agreements with manufacturers.

### Country Readiness for Introduction of COVID-19 Vaccines

#### Policy and Programmatic Guidance

As the scale of anticipated needs for the vaccine rollout became clearer, PAHO developed and disseminated guidelines to help National Immunization Programs (NIPs) plan for COVID-19 vaccine introduction<sup>23</sup> and develop comprehensive and costed COVID-19 vaccination plans. Since July 2020, PAHO has convened three meetings with NIP managers in the Americas to share best practices and recommendations. PAHO's TAG was convened twice (in August<sup>24</sup> and November 2020<sup>25</sup>) to assess emerging issues requiring evidence-based and actionable recommendations.

19 More information about the Country Readiness and Delivery (CRD) workstream is available online at: <https://www.who.int/initiatives/act-accelerator/covax/covid-19-vaccine-country-readiness-and-delivery/act-accelerator-country-readiness-and-delivery-for-covid-19-vaccines>.

20 <https://www.paho.org/en/documents/cd58-r9-e-covid-19>.

21 Bolivia (Plurinational State of), Dominica, El Salvador, Grenada, Guyana, Haiti, Honduras, Nicaragua, Saint. Lucia, Saint. Vincent and the Grenadines.

22 Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bermuda, Brazil, British Virgin Islands, Canada, Cayman Islands, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Jamaica, Mexico, Montserrat, Panama, Paraguay, Peru, Saint Kitts and Nevis, Suriname, Trinidad and Tobago, Turks and Caicos Island, Uruguay, and Venezuela (Bolivarian Republic of).

23 <https://iris.paho.org/handle/10665.2/52532>.

24 Report of PAHO's TAG on Vaccine-preventable Diseases meeting (4 August 2020): Available online at: <https://iris.paho.org/handle/10665.2/52769>

25 Report of PAHO's TAG on Vaccine-preventable Diseases meeting (16 November 2020). Available online at: <https://iris.paho.org/handle/10665.2/53182>

When it was clear that vaccines would not be immediately available for mass distribution by the end of 2020, the TAG developed clear guidance to prioritize populations that should have early access to vaccinations, recommending that the Region adopt the Values Framework and the Prioritization Roadmap (developed by WHO's Strategic Advisory Group of Experts (SAGE) on Immunization) to help countries in the Americas define these priority groups, while considering different epidemiologic scenarios. This guidance helped national health authorities to identify priority groups for vaccination in early 2021.

Recognizing that robust NIPs are the foundation for introducing COVID-19 vaccines, PAHO's TAG encouraged countries to strengthen their cold chain capacity, information systems, and vaccine safety surveillance, while laying the groundwork for generating demand for COVID-19 vaccination through community engagement, among other measures. The TAG additionally noted the need to strengthen national capacities surveillance of Events Supposedly Attributable to Vaccination or Immunization (ESAVI)/Adverse Events Following Immunization (AEFI) in relation to COVID-19 and other vaccines, supporting the establishment of a Regional ESAVI surveillance system. PAHO has since worked with countries to adopt these recommendations and has convened two regional meetings with the chairs of National Immunization Technical Advisory Groups (NITAGs) during the second part of 2020 to strengthen country readiness in the Americas.

### Monitoring Country Readiness

PAHO has worked tirelessly with countries in the Region to ensure that the NIPs had access to up-to-

date technical guidance and recommendations for the eventual arrival of COVID-19 vaccines as well as information on maintaining immunization services during the pandemic. This has entailed monitoring the status of these services and assessing how they have been impacted by the pandemic (more information on this in Pillar 9 of this report). These efforts were informed by findings from seven country surveys conducted in April and December 2020, which are available in a report summarizing the main findings and areas of concern.<sup>26</sup>

PAHO collaborated with its WHO counterparts to develop the Vaccine Introduction Readiness Assessment Tool (VIRAT), a planning roadmap to prepare for COVID-19 vaccine introduction; countries were encouraged to use this tool to self-assess their readiness. The Organization translated this tool into Spanish, Portuguese and French and it was shared with Member States in October 2020. PAHO utilized WHO's COVID-19 vaccine introduction and deployment costing tool (CVIC) to support countries to undertake early estimates of the need for resources for a COVID-19 vaccination campaign.

By the end of 2020, 16 countries had received PAHO's technical guidance and recommendations based on VIRAT tool assessments. This information has been critical to identify and address technical cooperation needs to support vaccine rollout, particularly for cold chain and regulatory capacities. PAHO developed a public dashboard for monitoring the application of the VIRAT tool. The dashboard also presents a panorama of the Region's readiness across the VIRAT's main strategic areas. The dashboard is accessible on PAHO's website.<sup>27</sup>

<sup>26</sup> PAHO. Summary of Status of NIPs during the COVID-19 pandemic:

Available online at: [https://iris.paho.org/bitstream/handle/10665.2/52544/PAHOFPLIMCOVID-19200013\\_eng.pdf?sequence=1&isAllowed=y](https://iris.paho.org/bitstream/handle/10665.2/52544/PAHOFPLIMCOVID-19200013_eng.pdf?sequence=1&isAllowed=y)

<sup>27</sup> COVID-19 Vaccine Introduction Readiness Tool (VIRAT) Regional Dashboard: [https://ais.paho.org/imm/IM\\_VIRAT.asp](https://ais.paho.org/imm/IM_VIRAT.asp).

## Building Country Capacity

The magnitude of the anticipated COVID-19 regional vaccination campaign requires that countries scale up essential infrastructure, as well as supplies and equipment for vaccine logistics, to ensure no one is left behind. Beginning in October 2020, PAHO held three regional and national training events aimed at improving planning abilities to estimate storage and transport capacities, the use and handling ultra-cold chain equipment, and the management of COVID-19 vaccines at ultra-low temperatures. In addition, PAHO held additional trainings on the use of planning tools. Since May 2020, PAHO supported 28 countries to evaluate their cold chain capacities and update their cold chain equipment inventories, including logistics requirements for vaccine distribution.

In March 2020, PAHO established a network of high-level focal points from the National Regulatory Authorities (NRA) responsible for aspects related to the COVID-19 response. This network, which met sixteen times in 2020, provided guidance to NRAs and facilitated information sharing and rapid response, the update of legal and policy frameworks for regulatory response during emergency, and the identification of regulatory challenges pertaining to COVID-19. PAHO developed and disseminated resources to improve regulatory and surveillance capacities to improve overall regional regulatory readiness.<sup>28</sup> Thirty regulatory experts from regional NRAs participated in WHO's PQ/EUL processes as evaluators of COVID-19 vaccines.

Given that COVID-19 vaccines are new products, it is particularly important to support countries to enhance

surveillance efforts to monitor their safety and impact. PAHO established a regional vaccine safety group to support countries in matters pertaining to regulatory readiness for vaccine introduction and surveillance, ESAVI/AEFI surveillance, and communication and generating demand for COVID-19 vaccines in the Americas. This group enabled PAHO to assess the maturity of country ESAVI/AEFI surveillance systems and provide national level capacity building workshops to CARICOM countries to ensure ESAVI surveillance systems are in place. In addition, PAHO began exploring how to support countries to leverage and adapt existing regional influenza surveillance and vaccine effectiveness networks, such as SARInet and REVELAC-i, to assess the effectiveness and impact of the COVID-19 vaccine.

Deploying vaccines to an entire population represents a daunting task during an ongoing pandemic, where health services are overburdened. Given the need for robust planning and identified resources, PAHO disseminated WHO's 'Guidance for National Deployment and Vaccination plan (NDVP)'<sup>29</sup> in November 2020 and provided comprehensive in-country support to develop their NDVPs. Countries such as Brazil received technical cooperation to develop state-level COVID-19 immunization plans.

In preparation for the review of the NDVPs, by the end of 2020 PAHO had established an interprogrammatic Regional Review Committee (RCC) to provide advice on critical areas for a successful vaccination rollout: regulatory preparedness; planning, coordination and service delivery; costing and funding; supply chain and waste management; human resources and training;

28 Regulatory oversight in the pandemic. Available online at: <https://iris.paho.org/handle/10665.2/52266>;  
Post-authorization surveillance of medical products. Available online at: <https://iris.paho.org/handle/10665.2/52578?locale-attribute=es>;  
Reliance for Emergency Use Authorization. Available online at: <https://iris.paho.org/handle/10665.2/52027>.  
29 [https://www.who.int/publications/i/item/WHO-2019-nCoV-Vaccine\\_deployment-2020.1](https://www.who.int/publications/i/item/WHO-2019-nCoV-Vaccine_deployment-2020.1).

demand generation; vaccine safety; monitoring and evaluation; and COVID-19 surveillance. The Organization will use these findings to work alongside countries and partners on the ground to build a successful COVID-19 vaccination program.

### Building Trust in Immunization: Managing the Infodemic and Creating Demand

Acknowledging that community engagement and effective communication are essential to the success of COVID-19 vaccine programs, from the early days of the pandemic PAHO focused on providing the best available scientific evidence, engaging a range of stakeholders across society and sectors. Since August 2020, PAHO's weekly press briefings on COVID-19 in the Americas have included updates on the development and progress of clinical trials of COVID-19 vaccines, as well as access mechanisms and key considerations to plan and prepare for the introduction of vaccines.

In September 2020, PAHO formed a working group to address communications on COVID-19 vaccines. Subsequently, PAHO held workshops for communicators and journalists on covering issues related to COVID-19 vaccines. It was critical to equip these opinion formers with the tools and knowledge to responsibly and accurately report on these issues. PAHO also organized Twitter and Facebook Live

sessions with experts to talk to the public about COVID-19 vaccines and respond to their questions and concerns.

Since the early days of the pandemic, PAHO has been closely monitoring the progress on COVID-19 vaccine candidates as well as recurring concerns, fears, and questions from the public. Most recently, PAHO has worked closely with Twitter and Facebook to improve the Organization's social media content and monitoring of vaccination efforts. PAHO also collaborated with Google Question Hub to identify gaps in knowledge about the COVID-19 vaccine, developing a technical document with Frequently Asked Questions (FAQ). The FAQs are periodically updated as more evidence becomes available and have been coordinated closely with WHO to identify other relevant vaccination information that can be translated or adapted to the Americas.<sup>30</sup> PAHO developed a COVID-19 vaccination website<sup>31</sup> that is continuously updated with information and resources for different audiences. Content includes tools for health authorities to infographics, social media messages and cards, video clips, and messages from the Director, in addition to guidelines and other materials to help health workers communicate with parents, caregivers, and patients about vaccine safety.<sup>32</sup>

<sup>30</sup> <https://iris.paho.org/handle/10665.2/53238>.

<sup>31</sup> <https://www.paho.org/en/covid-19-vaccines>.

<sup>32</sup> <https://iris.paho.org/handle/10665.2/53167>.



PAHO worked with health authorities from the Alta Guajira in Colombia to sustain primary health care during the pandemic in indigenous communities, including the Wayuu population. PAHO, 29 July 2020

## RESPONSE PILLARS



## Pillar 1. Country-level Coordination, Planning, and Monitoring

This pillar of the response to the global COVID-19 pandemic calls for the activation of national public health emergency management mechanisms, with the engagement of all relevant ministries such as health, education, travel and tourism, public works, environment, social protection, and agriculture, to provide coordinated management of COVID-19 preparedness and response.

### Activated Mechanisms for PAHO's Response

PAHO activated its Incident Management Support Team (IMST) on 17 January 2020, rapidly mobilizing 71 regional-level technical staff and convening technical subgroups to provide additional technical and analytical support. PAHO's 27 country offices established country-level IMSTs to provide immediate and rapid technical guidance and support to health authorities across Latin America and the Caribbean (LAC).

PAHO's Incident Management Support Team was structured around three areas of response:

- **Epidemic intelligence**, critical to ensuring that surveillance systems are in place to detect cases of COVID-19; that people have access to timely and accurate testing; and that decisionmakers have the analysis they need to formulate policies and strategies to stem the spread of the virus.
- **Public health measures**, to guide Member States in reducing the number of infections, through public health and travel-related measures that help reduce the likelihood of infection while ensuring that systems are in place to detect new cases coming from abroad.<sup>33</sup>
- **Strengthening health systems**, ensuring they are prepared to manage outbreaks of COVID-19 with adequate staffing levels, protected health workers, evidence-based treatment protocols, and the appropriate supplies and equipment of good quality.

<sup>33</sup> These measures are in compliance with the International Health Regulations (IHR 2005). Early projections demonstrated that the COVID-19 virus had the potential to result in an extraordinary rise in cases, which could rapidly overwhelm health systems.

During 2020, the IMST actively engaged with Member States. PAHO's Director has provided the highest possible level of representation, advice, and support to all requests from Member State groupings such as CARICOM, PROSUR, SICA, MERCOSUR, as well as the OAS and other regional multilateral organizations in order to support and finance the response. Regular meetings are convened with ministers of health to provide the most current advice, based on available evidence and science.

### Rapid Deployments and a New Approach for Technical Cooperation

Between February and 15 March 2020, PAHO deployed 25 missions of technical experts to 20 countries to ensure they were prepared to conduct laboratory molecular testing for COVID-19 and implement contact tracing. They were armed with country assessments on readiness to manage COVID-19 cases, including infection prevention and control measures.

Once borders closed, PAHO rapidly adapted to a new, mostly virtual modus operandi. PAHO delivered more than 150 regional and national virtual trainings and webinars to more than 10,000 health professionals across the Americas on estimating needs for PPE and hospital and ICU beds; identifying alternative medical care sites, given overburdened health systems; molecular diagnostics for COVID-19; surveillance; and other essential areas.

### Supporting Multisectoral and National Action to Respond to COVID-19

PAHO's support is aligned with the global Strategic Preparedness and Response Plan for COVID-19 (SPRP),<sup>34</sup> was originally published in February 2020; it was last updated in February 2021. This plan outlines the support that WHO and the international community stand ready to provide to enable all countries to respond to COVID-19. WHO also issued Operational Planning Guidelines to support the development of Country Preparedness and Response Plan for COVID-19. PAHO integrated the pillars from WHO's SPRP into its Response Strategy and Donor Appeal (since updated on 1 April 2021 to encompass technical cooperation to prepare the Region for the roll out of vaccines for COVID-19 and to encourage ongoing fundamental COVID-19 response actions).<sup>35</sup>

PAHO's country office teams worked directly alongside government counterparts to develop national plans of action based on countries' transmission and risk levels at the time. As at 31 December 2020, 32 of 35 countries in the Americas had already developed and were implementing their COVID-19 preparedness and response plans, with guidance and support from PAHO.

All 35 Member States activated intersectoral mechanisms in response to the COVID-19 pandemic, involving the highest political leadership, and including key sectors to provide a comprehensive

34 Available online at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/strategies-and-plans>.

35 Pan American Health Organization. Response to the COVID-19 Pandemic in the Americas Response Strategy and Donor Appeal January – December 2021. Available online at: <https://www.paho.org/en/documents/response-covid-19-pandemic-americas-response-strategy-and-donor-appeal-january-december>

response. PAHO liaised with other in-country UN agencies to lead the health sector response and ensure that the UN system followed a holistic approach to tackling this pandemic and its repercussions.

In September 2020, health authorities from the Americas met virtually at the 58th Directing Council of the Pan American Health Organization to discuss the situation of COVID-19 in the Region and the challenges and strategies for the way forward as the pandemic continued.<sup>36</sup> PAHO's Director urged countries to cooperate in fight against the COVID-19 pandemic and adapt, innovate, and reorient public health work. As mentioned in the previous section, it is important

that governments revisit these plans, considering that transmission situations and resource needs have changed significantly for many countries since the early days of the pandemic.

## Partnerships that Save Lives

WHO launched the COVID-19 Partners' Platform, a tool to facilitate coordination and governance between countries, UN Country Teams, donors, and partners. The Platform enables joint resource planning, the identification of funding gaps, and the monitoring of progress against the National Action Plans. Its three main features are:

<sup>36</sup> Pan American Health Organization. CD58/6. Covid-19 Pandemic in the Region of the Americas. September 2020. Available online at: <https://www.paho.org/en/documents/cd586-covid-19-pandemic-region-americas>.



PAHO conducted its second media briefing in the early days of the COVID-19 pandemic. PAHO, 31 March 2020

- Action Checklist to review and monitor the status of public health actions in each of the nine public health pillars (see more in following sections of this report).
- Resource Needs Tracker to highlight country resource needs (financial, supplies and personnel) to deliver the necessary public health response
- Resource Tracking Database to provide a transparent overview of donor contributions to the COVID-19 response.

To date, PAHO, in coordination with WHO, has supported and trained 33 countries in LAC to access the Partners Platform. Twenty-eight countries uploaded their National Response Plans and used the action checklist to review and monitor the status of their public health actions.

## Guidance for Decisionmakers

PAHO has published 102 evidence-informed guidelines and guidance documents<sup>37</sup> geared toward an effective response to the COVID-19 pandemic. These resources are the result of extensive consultations with global and regional experts as well as exhaustive reviews of existing and emerging evidence. They have facilitated the work of national governments and health authorities by allowing them to adapt the recommendations, protocols, and considerations to create national strategies, policies, and protocols. Examples of the guidance PAHO has developed include:

- Considerations on health equity, gender, ethnic equality, and human rights as national authorities plan and implement their response to COVID-19.
- Considerations on Indigenous peoples, Afro-descendants, and other ethnic groups for planning health services delivery during the pandemic, keeping in mind existing inequities that affect these populations.
- Guidance for establishing shelters in the Caribbean in the context of COVID-19 (in light of the upcoming Atlantic hurricane season), including spacing for beds and cots, recreation areas, ventilation, and other key factors.
- A Common Public Health Policy (collaboration with CARICOM, CARPHA, UWI and CDEMA) to address the COVID-19 pandemic, including principles surrounding testing, joint procurement of supplies (pharmaceuticals, PPE), testing protocols, and sourcing of additional medical personnel.
- Periodic Living Update of Potential COVID-19 Therapeutics Options.<sup>38</sup>
- Considerations for strengthening the first level of care in the Management of the COVID-19 pandemic.<sup>39</sup>

PAHO also has played an essential role in helping countries and partners in the Americas to implement these guidance documents and to share technical knowledge. For example, recognizing the strength of the national reference laboratory in Chile, PAHO made it possible for their laboratory experts to provide live virtual demonstrations and training to Uruguay on molecular diagnostics for COVID-19.

37 All publications and technical guidelines are available at: <https://www.paho.org/en/technical-documents-coronavirus-disease-covid-19>.

38 Pan American Health Organization. Periodic Living Update of Potential COVID-19 Therapeutics Options: Summary of Evidence. Rapid Review. Available online at: <https://iris.paho.org/handle/10665.2/52719>.

39 Pan American Health Organization. Considerations for strengthening the first level of care in the Management of the COVID-19 pandemic. January 2021. Available online at: <https://iris.paho.org/handle/10665.2/53190>.

## Mobilizing Resources for the Americas

During the course of 2020 PAHO issued an appeal (and subsequent update) to support and scale-up public health preparedness and response efforts in LAC countries to respond to the COVID-19 pandemic. As at 31 December 2020, PAHO had received US\$ 223.65 million from donors, reaching 111.83% of the funding needs for 2020 as detailed in the Appeal. An additional US\$ 24.4 million had been pledged by donors, which materialized at the beginning of 2021. PAHO had also received US\$ 48.5 million from International Financial Institutions (IFIs) to support the procurement, on behalf of Member States, of essential supplies and equipment critical to the response (PPE, lab tests and reagents, clinical care and lab equipment, etc.).

The generous contributions from the following donors enabled PAHO to reach 112% of the total appeal by 31 December 2020: governments of Belize, Canada, Colombia, Japan, Korea, New Zealand, Spain, Sweden, Switzerland, the United Kingdom of Great Britain and Northern Ireland, the United States of America, as well as the Caribbean Development Bank, the Caribbean Confederation of Credit Unions, the Central American Economic Integration Bank, Corporación Andina de Fomento, Banco de Desarrollo de América Latina,

the European Union, Fundación Yamuni Tarbush, the International Organization for Migration, the Inter-American Development Bank, the Rockefeller Foundation, the UN Central Emergency Response Fund, the UN Development Fund, the UN International Children's Emergency Fund the UN Multi-Partner Trust Fund, the UN Office for South-South Cooperation, the World Bank Group, World Food Program, the World Health Organization and its donors, other small contributions, and the invaluable collaboration from partners within the Americas and beyond. PAHO's response to the pandemic also benefitted from the strategic partnerships and in-kind donations from Direct Relief, Facebook, Mary Kay Cosmetics, Twitter, as well as Salomon Beda, Sony Latin Music, and Global Citizens.

With these resources, PAHO provided critical technical support. More than 41% of the funds have gone directly to procuring PPE, laboratory tests, and other essential goods for the Americas; the remainder has gone to capacity building and providing technical expertise to support ministries of health. PAHO estimates that an additional US\$ 219 million is needed to support LAC countries in tackling the pandemic in 2021, including the main challenge of the COVID-19 vaccine rollout, while sustaining efforts in the other eight pillars of the response.

## RESPONSE PILLARS



## Pillar 2. Risk Communication and Community Engagement

In a situation report earlier in 2020, WHO stated that the “2010 novel Coronavirus outbreak and response has been accompanied by an ‘infodemic’: an over-abundance of information—some accurate and some not—that makes it hard for people to find trustworthy sources and reliable guidance when they need it. With the popularity of social media, managing the COVID-19 pandemic and the related ‘infodemic’ requires ever more swift, regular and coordinated action from across government and society.”<sup>40</sup>

During this pandemic, governments have been called on to provide quick, sensitive and trustworthy responses to a public eager to know the current situation, how the government will respond, and what they can and should do. Risk communication,

which includes developing risk communication and community engagement (RCCE) plans and materials tailored to the population, is an integral component of a national response to COVID-19.

### Technical Cooperation on Risk Communication

PAHO has and continues to develop guidance on risk communication for Member States, as needs evolve.<sup>41</sup> Risk communication strategies and tools for healthcare workers, media communicators, and leaders were produced and distributed to Member States. This helped countries to develop and implement national RCCE plans that consider all segments of the countries’ populations.

<sup>40</sup> World Health Organization (2020). Coronavirus Disease Situation Report. Online at: [https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200415-sitrep-86-covid-19.pdf?sfvrsn=c615ea20\\_6](https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200415-sitrep-86-covid-19.pdf?sfvrsn=c615ea20_6).

<sup>41</sup> For more information, consult the PAHO publication Risk Communication and Community Engagement, available online at: <https://www.paho.org/en/documents/covid-19-risk-communication-and-community-engagement-rcce>.

## Facilitating Online Training on COVID-19

The PAHO/WHO Virtual Campus for Public Health hosts eight online WHO courses, which PAHO has translated into Spanish and Portuguese (580,903 enrolled as at 31 December 2020):

- General COVID-19 considerations.
- Operational planning.
- Infection prevention and control.
- Emerging respiratory viruses, including COVID-19: detection methods, prevention, response, and control.
- Standard precautions such as hand hygiene.
- Occupational health.
- Clinical management.
- Design of treatment facilities.

PAHO's Caribbean Node of the Virtual Campus also features a dedicated space for COVID-19 resources such as webinars, five virtual courses (including three translated into Dutch), public information, and lessons learned (currently from Grenada). PAHO also collaborated with CARICOM and PANCAP (the Pan Caribbean Partnership Against HIV and AIDS) to:

- Provide 10 webinars on COVID-19 to Caribbean countries and territories.
- Broadcast key messages on infection prevention and control; delivery of HIV services; and psychosocial aspects for healthcare workers and adolescents

## Communicating to the Public

Throughout 2020, PAHO produced infographics, social media cards, and videos (many with sign language interpreters) that offer guidance on protecting health workers, older people, and other populations

vulnerable to infection. These materials address the correct use of masks, handwashing without wasting water, vaccination during the pandemic, domestic violence, and other priority issues. Spanish-language radio spots were produced to talk about stress during lockdown or quarantine, fight the stigma of the virus, and help protect others from COVID-19.

Facebook Live events allow the public to directly "Ask the Experts" about COVID-19. During the weekly sessions, PAHO:

- Discussed how COVID-19 is impacting efforts in the Americas to eliminate communicable diseases, including dengue, malaria, intestinal parasites, HIV, tuberculosis, hepatitis, and HPV.
- Discussed suicide prevention during the COVID-19 pandemic.
- Provided information on emergency medical teams (EMTs) and how they help to respond to emergencies in the Americas. This Facebook Live event also was streamed on Twitter. Click [here](#) to view this video.
- Examined COVID-19 treatments, including clarifying that antibiotics were not an effective treatment, and explained the danger of antimicrobial resistance to global health.

In light of the end-of-the-year holiday celebrations throughout the Region, PAHO produced videos and infographics to disseminate measures to help ensure that family and friends celebrate safely.

PAHO's Director holds weekly virtual press briefings to inform and update the public, issue calls for action, and share recommendations to stem the spread of COVID-19. The briefings have been broadcast live and shared on the regional social media sites: Facebook, Twitter (Spanish/English), and YouTube. These

briefings have allowed the Organization to reach over 1.2 million people in the region and around the globe, press from global, regional, and national outlets, and other partners and stakeholders.

During the weekly press briefing, the Director:

- Encouraged countries to ensure readiness for the next health emergency, indicating that a first step would be to expand the health work force.
- Urged Member States to ensure that measures are in place to reduce the risk of infection from COVID-19 as countries reopened schools, markets, and other locations such as election polling sites.
- Explained how the COVAX Facility works to ensure that countries have timely access to COVID-19 vaccines. Additionally, this press briefing highlighted PAHO's work to strengthen its Revolving Fund for Vaccines, the largest regional mechanism through which countries self-finance the purchase and delivery of vaccines.
- Noted that rates of severe COVID-19 illness in the region have fallen, partly due to growing knowledge of the virus and how to manage critically ill patients, as well as to the work of governments that acted quickly to expand national capacities.
- Remarkd on the complexities of the pandemic in different parts of the Americas while noting that PAHO's Strategic Supply Fund would make available a new diagnostic test that could be performed anywhere, without overburdening the Region's laboratories.
- Recognized the significant challenges that health workers have faced since the onset of the pandemic. Countries in the Region were urged to protect the mental health of health workers and the wider population as COVID-19 trends continue in a troubling direction in some countries.
- Urged countries to reinforce their surveillance systems, prioritize contact tracing, take steps to rely

on their primary health systems, and ensure that surge medical teams are ready in case of significant rises in the number of cases.

- Urged countries to help build trust needed for the upcoming vaccines, by providing transparent, accurate information about the vaccine development process, as well as its safety and efficacy. Health authorities were also urged to stand up against misinformation as these rumors had an impact on people's perceptions and attitudes toward a COVID-19 vaccine.
- Noted the considerable impact that the pandemic has had on Afro-descendant populations in the Americas and urged Member States to take steps to protect these and populations in situations of vulnerability.
- Urged countries to double down on efforts to reduce transmission while taking steps to prepare for the rollout of a vaccine.
- Updated on preparations for the rollout of a COVID-19 vaccine in the Americas and in supporting countries and territories to prepare their health systems. This has ranged from technical support to develop national immunization plans to issuing recommendations on how to prioritize initial doses, highlighting the need to target and empower healthcare workers.
- Recognized the damage the pandemic has inflicted on the Americas, while focusing on how inequalities and underinvestment in health systems have exacerbated this situation.

PAHO developed a COVID-19 manual for reporters to help them better grasp and report on the key issues around the pandemic. More than 200 journalists have participated in training on the recommendations from its publication, "An informative guide. Advice for journalists."<sup>42</sup>

42 COVID-19: An informative guide. Advice for journalists. Available online at: <https://iris.paho.org/handle/10665.2/52392>.

## Partnering with Artists to Combat COVID-19

Colombian singer Salomon Beda is donating the royalties from his musical theme, “Pa’alante,” to PAHO COVID-19 response activities. Artists from Argentina, Chile, Colombia, Ecuador, Mexico, Peru, Puerto Rico, the United States of America, and Venezuela (Bolivarian Republic of) joined forces to record a new version of the song, called “Pa’alante”, to raise funds under an initiative called #Volveranlosabrazos (the hugs will return).

Joining forces in the fight against COVID-19, Sony Latin Music and international advocacy organization Global Citizen collaborated to release a brand-new version of Diego Torres’ “Color Esperanza (The Color Hope).” The song’s record label net proceeds benefit PAHO’s COVID-19 relief efforts. PAHO also collaborated with Sony Latin Music to disseminate messages on fighting COVID-19 during the Made in Casa concert.

PAHO also collaborated with artists from 10 Latin America countries to produce a collection of graphics to support PAHO’s COVID-19 response, focusing on

three challenges: preventing COVID-19 infection; combating misinformation and myths about the virus; and promoting mental health during the pandemic. A jury selected 10 images that will be widely disseminated in the Latin America to raise awareness about Coronavirus. The initiative grew out of a collaboration between IMPAQTO, the social innovation laboratory and coworking network; NEXUS, a network of young philanthropists; and the PVBLIC Foundation, which mobilizes media, data, and technology for sustainable impact. All three institutions understood PAHO/WHO’s challenge in the region. NEXUS noted that “there is a clear need for prevention campaigns that have cultural relevance and speak to people with reference to their local experiences.” IMPAQTO was inspired by “the huge challenge PAHO faced and saw the opportunity to connect two worlds that rarely talk to each other: international bureaucracy and creatives.” said Michelle Arevalo-Carpenter, CEO of IMPAQTO, one of the organizing institutions.

## RESPONSE PILLARS



## Pillar 3. Surveillance, Rapid Response Teams, and Case Investigation

COVID-19 surveillance data are essential to calibrate appropriate and proportionate public health measures. In addition to active case finding in communities, health facilities, and at points of entry/exit, it will be necessary to enable the general population to practice self-surveillance, in which individuals are asked to self-report as a suspected case as soon as they have symptoms or signs and/or if they are a contact of a confirmed case.

All countries are encouraged to adopt international R&D Blueprint efforts and research protocols such as the Unity studies to investigate additional epidemiological, virologic, and clinical characteristics.

In a scenario in which community transmission is occurring, it is essential to monitor the geographical spread of the virus, transmission intensity, disease trends, characterize virological features, and assess impacts on health-care services.

*Source: WHO Operational Guidelines to Support Country Preparedness and Response for COVID-19*

An essential part of PAHO's response has been to work with countries to strengthen their surveillance systems. PAHO continued to conduct Event-Based Surveillance (EBS),<sup>43</sup> while also supporting countries to boost their Indicator-Based Surveillance (IBS). This joint approach improved surveillance systems' capacity to

detect COVID-19 cases. For example, PAHO provided a training on event-based surveillance to state-level health promotion authorities from 32 states in Mexico as part of the country's program to analyze public perceptions and risk communication strategies.

<sup>43</sup> Event-based public health surveillance looks at reports, stories, rumors, and other information about health events that could be a serious risk to public health. Such information may be described as unstructured information because the information obtained is non-standardized or subjective. Indicator-based public health surveillance is a more traditional way of reporting diseases to public health officials. Indicator-based surveillance involves reports of specific diseases from healthcare providers to public health officials.

## Surveillance Systems Ready to Detect COVID-19

During this period, efforts continued to ensure that countries in Latin America and the Caribbean integrate COVID-19 into their routine severe acute respiratory illness/influenza-like illness (SARI/ILI) surveillance systems. To date, 21 countries have done so.

Seroprevalence<sup>44</sup> studies have provided valuable data on how the virus has spread since the onset of the pandemic. PAHO launched a new dashboard with seroprevalence studies in Latin America and the Caribbean,<sup>45</sup> including information on individual studies ranging from the study design, sampling method, sample sizes, and other relevant information.

Most recently, PAHO's regional team provided technical support on seroepidemiological studies; the use of influenza sentinel surveillance to monitor for COVID-19 cases; contact tracing; and the coordination of COVID-19 Unity studies. Seroprevalence studies have provided invaluable data on how the virus has spread from the onset of the pandemic to date. Below are several examples of regional support.

- Health professionals in Suriname received training on rapid response teams.
- Chile, Costa Rica, and Paraguay received support to improve COVID-19 surveillance by using SARI/ILI case definitions and influenza sentinel surveillance to monitor for COVID-19 cases and by boosting contact tracing.

- The regional influenza team contributed to the WHO Expert Consultation to Adapt Influenza Sentinel Surveillance Systems for COVID-19. Counterparts from Brazil, Chile, Costa Rica, and Jamaica also contributed. Support continued to strengthen contact tracing and in activities related to the COVID-19 Unity Studies.
- In Chile, PAHO participated in a webinar convened by the University of the Americas on COVID-19, influenza, and contamination. The webinar focused on the surveillance of respiratory diseases and the use of sentinel surveillance for COVID-19.
- In Guatemala, 47 health professionals from the national and department levels received advanced training on the use of the PAHOFlu platform to strengthen SARI and ILI surveillance.

## Monitoring and Projecting the Spread of the Pandemic in the Americas

In closely monitoring the pandemic, PAHO also looks at healthcare workers, indigenous populations, Afro-descendants, and other population segments.

## Epidemiological Alerts

Tracking, analyzing and forecasting epidemiological trends is key to an effective response. PAHO produced its first epidemiological alert on this novel coronavirus on 16 January 2020. Since then, it disseminated 30 epidemiological updates and alerts<sup>46</sup> on the regional

<sup>44</sup> Seroprevalence refers to the percentage of individuals in a population who have antibodies to an infectious agent. Read more at the CDC website: <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/seroprevalence-surveys-tell-us.html>.

<sup>45</sup> <https://ais.paho.org/philip/viz/COVID-19Seroprevalence.asp>.

<sup>46</sup> Epidemiological Alerts provide information about the occurrence of international public health events that have implications or could have implications for the countries and territories of the Americas, as well as recommendations issued by the Pan American Health Organization. Epidemiological Updates are released as new information becomes available regarding events previously shared through Epidemiological Alerts. The Epidemiological Alerts and Updates focus primarily on events caused by infectious agents, although they also may be on events concerning contaminated goods, food safety, or of chemical or radionuclear origin, per the provisions of the International Health Regulations (IHR (2005)).

and subregional epidemiological situation. Weekly reports are published with SARS-CoV-2 surveillance indicators, as well as influenza and other respiratory viruses. To date, 38 of the 54 countries, territories, and areas in the Americas have reported these data. Meanwhile, PAHO continued to analyze trends in the Region, particularly through the collection of COVID-19 line list of nominal case data. During the last reporting week in 2020, approximately 71% of cases and 55% of deaths were captured for analysis.

PAHO developed simulation models to aid local-level preparedness and response by forecasting regional response needs. Recent epidemiological alerts present specific analyses for cases:

- Among pregnant women (cases/deaths data from 14 countries/territories for which information were available).
- Among indigenous populations (cases/deaths data from 11 countries for which information were available).
- Multisystem inflammatory syndrome (MIS) in children and adolescents temporarily related to COVID-19 (cases/deaths from 16 countries/territories officially reported to PAHO/WHO or published information on an official website).
- Among healthcare workers (cases/deaths from data reported in 25 countries/territories for which information was available).
- Recurring waves and outbreaks of COVID-19,<sup>47</sup> which urged Member States to prepare and implement actions for a rapid surge in cases, while maintaining capacities at all levels of care.
- Variants of SARS-CoV-2 in the Americas.

47 Pan American Health Organization. Recurring Waves and Outbreaks of COVID-19. October 2020. Available online at: <https://www.paho.org/en/documents/epidemiological-alert-recurring-waves-and-outbreaks-covid-19-9-october-2021>.



PAHO demonstrates how to use an oximeter during a site visit to the Haitian Department of Sud-Est. PAHO, 6 August 2020.

## Regional Geo-Hub

PAHO has developed a regional Geo-Hub,<sup>48</sup> which includes dashboards (one dashboard shows subregional and country epidemiological curves, including cases, incidence rates, and cumulative incidence rates and epidemiological data updated daily). Today there are four sub-regional and 56 country/territory Geo-Hubs in the Americas. In addition, the public can consult PAHO's interactive dashboard showing cumulative cases, deaths, cumulative incidence rate, new cases and deaths, as well as several other epidemiological indicators reported by countries and territories. This real-time information has been crucial in supporting countries with their preparedness and response and promotes international coordination and awareness of the situation in the Region.

GIS data are invaluable when it comes to identifying the scope and scale of the spread of COVID-19. PAHO supported 10 countries (Argentina, Belize, Chile, Costa Rica, Ecuador, Guatemala, Guyana, Nicaragua, Suriname, and Venezuela (Bolivarian Republic of)) to establish their own GIS hubs, linked to the regional hub, to better monitor COVID-19 cases.<sup>49</sup>

PAHO convened a joint SARInet/REVELAC-<sup>50</sup> virtual meeting titled "Leveraging influenza surveillance and immunization toward COVID-19 pandemic control." More than 270 participants from 41 countries and territories, including from PAHO's regional and country offices, WHO, CARPHA, and the WHO Collaborating Center at the U.S.

CDC, attended the three-day meeting, which focused on how countries leverage influenza surveillance and immunization platforms for COVID-19. Click [here](#) to view the meeting agenda and presentations.

## Tools to Support Response to COVID-19

### Major Metropolitan Areas

PAHO developed a methodology that enables health authorities in large cities to assess their vulnerability and the risk of the spread COVID-19, thus enabling them to direct resources to high-risk areas. This tool considers epidemiological indicators as well as the risk and response capacity available in a major metropolitan area. It is available in English, French, Portuguese, and Spanish. Meanwhile, PAHO has worked with health authorities from Argentina, Colombia, Haiti, Mexico, and other countries in the Americas to apply this tool to key major urban centers.

### Underlying Conditions and Co-Morbidities/Severe Cases

Understanding the number of individuals at increased risk of severe disease can inform the design of strategies for shielding, managing chronic care conditions, and allocating vaccines. In collaboration with the London School of Hygiene and Tropical Medicine/Center for Mathematical Modelling of Infectious Disease, PAHO developed and launched

48 Visit the COVID-19 Geo-Hub at <https://paho-covid19-response-who.hub.arcgis.com/app/paho-americas-regional-covid-19-dashboard>.

49 In total there are 52 COVID-19 Geo-HUBS (compiling dashboards plus other elements): one regional hub for the Americas; four subregional hubs (North America, Central America, South America, Caribbean and Atlantic Ocean); seven hubs \ dashboard sub-sub regionals: Amazonia, North Amazonia Operations, ECC, CARICOM, UK Overseas Territories (UKOT), French Territories and Overseas Collectivities, The Netherlands Overseas Constituent Countries and Special Municipalities; 41 Geo-Hubs by country / territory.

50 The Severe Acute Respiratory Infections network (SARInet) is a regional collaboration of professionals in hospitals, laboratories, and associated organizations who participate in SARI surveillance in the Americas. REVELAC is the acronym in Spanish for the Network for the Evaluation of Influenza Vaccine Effectiveness in Latin America and the Caribbean.

a COVID-19 Comorbidities Tool<sup>51</sup> to assist countries in identifying populations at risk of COVID-19 due to underlying health conditions. The tool was used in more than 14 countries, in close collaboration with the national counterparts. The population can be classified as having no underlying conditions, one condition or multiple conditions, by five-year age ranges, and by sex.

- Argentina received technical cooperation to apply this tool to estimate risk in the context of the country's epidemiological situation.
- PAHO delivered a webinar to health authorities from Bolivia (Plurinational State of), Paraguay, and Peru on the increased risk of severe COVID-19 cases due to underlying conditions.
- Training sessions on the use of the co-morbidities tool were held with Honduras and Paraguay.
- A second with Ecuador and Honduras detailed techniques for analyzing co-morbidities in at-risk populations.

## CovidSIM

CovidSIM is a low-cost mobile simulator, designed to provide volunteers from the public with a basic understanding of infection control. Simulated test centers are used to train volunteers on safely donning and doffing personal protective equipment (PPE) and swabbing symptomatic patients for COVID-19. The purpose is to alleviate pressure on health systems, allowing greater numbers of nurses and paramedics to return to the front line.<sup>52</sup>

PAHO developed a how-to guide for using the CovidSIM modeling exercise. The Organization provided continued support to Belize to use CovidSIM to project the spread of the virus in light of ongoing public health measures and the country's health system. Training also took place in Guyana and Jamaica. Click [here](#) to access the "How to" guide for CovidSIM.

## Effective Reproduction Rate Estimation (Rt) Tool

To have a clearer understanding of the current dynamic of the COVID-19 epidemic, PAHO partnered with WHO, Harvard University, and Epimos GmbH and ExploSYS BmbH, both private research projects, to further develop tools that enable countries to analyze and visualize the effective reproductive rate of the virus and make projections as to the number of new infections; the number of individuals who may become sick; or how many will require hospitalization or admission to an ICU. Both CovidSIM and EpiEstim are available for health authorities to use, free-of-charge. PAHO has developed step-by-step guidelines on how to apply these tools to the context of their epidemiological and health systems.<sup>53</sup> Eleven countries are being supported to use these tools: Argentina, Belize, Bolivia (Plurinational State of), Chile, Colombia, Dominica, El Salvador, Guatemala, Guyana, Honduras, and Saint Lucia.

51 COVID-19 and comorbidities in the Americas: Hands-on tool to estimate the population at increased and high risk of severe COVID-19 due to underlying health conditions for the Americas. Online at: <https://www.paho.org/en/documents/covid-19-and-comorbidities-americas-hands-tool-estimate-population-increased-and-high>.

52 CovidSIM: building testing capacity through public engagement with healthcare simulation. Christodoulides N, et al. BMJ Simul Technol Enhance Learn 2021;7:52–53. doi:10.1136/bmjstel-2020-000637. Online at: <https://stel.bmj.com/content/bmjstel/7/1/52.full.pdf>.

53 Pan American Health Organization, 2020. COVID-19 Modeling Exercise Technical Guide: Methodology and Parameters, 4 May 2020. Available online at: <https://iris.paho.org/handle/10665.2/52405>.

## Excess Mortality

Countries face the challenge of formulating strategies and implementing effective interventions to stem the spread of COVID-19 despite having incomplete data. Recognizing this reality, PAHO developed guidelines for conducting excess mortality analyses.<sup>54</sup> Using mortality data from Ecuador and Peru, PAHO conducted excess mortality case studies in both countries, considering COVID-19 and non-COVID-19 deaths (disaggregated by sex, age group, marital status, education, and place of occurrence). PAHO supported Bolivia (Plurinational State of) to use existing data to assess excess mortality that could be attributed to COVID-19.

PAHO and other health partners collaborated with Vital Strategies, a health NGO, to finalize a methodology and criteria for estimating excess mortality from the COVID-19 pandemic. This collaboration yielded a web-based Excess Mortality Calculator,<sup>55</sup> a tool to help countries to produce analysis and graphs on the current situation.

## Contact Tracing

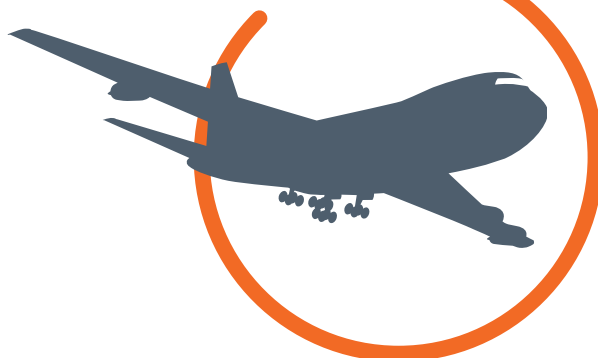
Beginning in 2020, PAHO began supporting countries to ramp up capacities for tracing and quarantine of contacts. PAHO issued considerations for health authorities undertaking ethical and effective contact tracing for COVID-19, as a complement to existing WHO recommendations.<sup>56</sup> Contact tracing and quarantine required the implementation of novel approaches and tools. Go.Data, WHO's contact tracing tool—which supports suspect case investigation and management, display of transmission chains, and contact tracing—was designed to help health authorities follow up on cases and possible contacts and rapidly identify and isolate potential cases before they could spread the virus further. In collaboration with GOARN, the Global Outbreak Alert and Response Network, PAHO trained 31 countries and territories to use the Go.Data app. Twenty-three countries and territories have already implemented the system or are working toward full implementation.

<sup>54</sup> Pan American Health Organization, 2020. Enhancing COVID-19 mortality surveillance in Latin America and the Caribbean through all-cause mortality surveillance. Online at: <https://www.paho.org/en/documents/enhancing-covid-19-mortality-surveillance-latin-america-and-caribbean-through-all-cause>

<sup>55</sup> Available online at: <https://preventepidemics.org/covid19/resources/excess-mortality/>

<sup>56</sup> Considerations for the Implementation and Management of Contact Tracing for Coronavirus Disease 2019 (COVID-19) in the Region of the Americas; PAHO; 2 June 2020; available at <https://iris.paho.org/handle/10665.2/52384?locale-attribute=en>

## RESPONSE PILLARS



## Pillar 4. Points of Entry, International Travel, and Transport

Efforts and resources at points of entry should focus on supporting surveillance and risk communication activities. Appropriate public health measures at points of entry may include: entry and exit screening; education of travelers on responsible travel behaviours before, during, and after travel; case finding; contact tracing; isolation; and quarantine. Risk of imported cases can be managed through: an analysis of the likely origin and routes of importations; measures put in place at points of entry to rapidly detect and manage suspected cases among travellers, including the capacity to quarantine individuals arriving from areas with community transmission; and cleaning and disinfection of the environment at points of entry and onboard conveyance. It is critical that countries enable essential travel needed for pandemic response, humanitarian relief, repatriation, and cargo operations.

*Source: WHO Operational Guidelines to Support Country Preparedness and Response for COVID-19*

As COVID-19 rapidly spread across the globe, more and more countries reported imported cases; international travel-related measures were put in place to prevent further importations. In the absence of an available vaccine (at the end of 2020), the COVID-19 control strategy centered on the use of non-pharmaceutical interventions, including personal protective measures, environmental measures, social distancing, and international travel measures. Following the WHO Director General's declaration of COVID-19 as a Public

Health Emergency of International Concern (PHEIC), countries in the Americas put in place measures to restrict the entry of international travelers from specific countries that were experiencing significant COVID-19 transmission. Shortly after, countries began closing their borders. However, by the end of 2020, although air travel restrictions had eased somewhat, air travel was still significantly curtailed as compared to pre-pandemic levels.<sup>57</sup>

57 See International Civil Aviation Organization (ICAO) for more information by region. Online at: <https://www.icao.int/safety/pages/covid-19-airport-status.aspx>.

PAHO and WHO issued considerations on a range of social distancing and travel-related measures based on global, regional, and national circumstances. In anticipation of adjustments to these measures (either tightening or lessening them), PAHO provided national authorities with a framework of considerations to inform their decision-making process.<sup>58</sup> PAHO continues to provide guidance to Member States.

Even at the beginning of the pandemic, virtually all countries and territories in the Americas were able to maintain essential travel – humanitarian (e.g., repatriation, medical evacuation, transport of supplies for the response), food security, maintenance of essential services, and national security. However, by September 2020, most countries and territories in the Caribbean subregion began to resume non-essential travel to reactivate their tourism-dependent economies. Many other countries are in the process of establishing modalities and procedures to do so.<sup>59</sup>

The Organization collaborated with several civil aviation working groups regarding potential strategies for resuming non-essential travel. The regional team's guidance on resuming non-essential international travel in the context of the COVID-19 pandemic<sup>60</sup> helped countries as they evaluated testing requirements before or after international travel as a measure to reduce the risk of imported COVID-19 cases.

PAHO developed risk communication material providing travelers with clear and evidence-based information, including infection prevention and control measures, to reduce the risk of infection.

## Testing at Airports

In collaboration with the South American office of the International Civil Aviation Organization (ICAO), PAHO presented the limitations of SARS-CoV-2 testing as a consideration for their use in strategies for resuming non essential travel in a webinar for national civil aviation and health authorities from the Americas.

## Country-specific Support

PAHO worked with the International Organization for Migration (IOM) to formulate joint activities to reduce the risk of introducing cases across Mexico's border, and with UNHCR, the UN Refugee Agency, to provide recommendations on procuring face masks and respirators. In addition, PAHO shared recommendations with Mexican national and state-level health authorities regarding the resumption of non-essential international air travel, considering the risks of COVID-19 infection and additional spread.

PAHO shared guidance with health authorities in Colombia to develop a risk mitigation strategy for resuming non-essential travel. As international travel resumes, PAHO's office in Belize facilitated the exchange of information among government entities on the development of a multi-agency "Belize Travel Health App: Using Technology within the COVID-19 Response." In Bolivia (Plurinational State of), the team coordinated with national authorities to define a plan of activities related to requirements of the International Health Regulations (IHR).

<sup>58</sup> Pan American Health Organization. Considerations on Social Distancing and Travel-Related Measures in the Context of the Response to COVID-19 Pandemic. Online at: <https://iris.paho.org/handle/10665.2/52409>.

<sup>59</sup> Pan American Health Organization, Considerations on the Adjustments of Social Distancing and Travel-Related Measures in the Context of the Response to COVID-19 Pandemic, 24 April 2020. Online at: <https://iris.paho.org/handle/10665.2/52407>.

<sup>60</sup> Pan American Health Organization. Resuming non-essential international travel in the context of the COVID-19 pandemic – Advice on the use of COVID-19-related testing. December 2020. Online at: <https://www.paho.org/en/documents/resuming-non-essential-international-travel-context-covid-19-pandemic-advice-use-covid-19>.

## RESPONSE PILLARS



## Pillar 5. National Laboratories

Countries should prepare laboratory capacity to manage large-scale testing for COVID-19 — either domestically or through arrangements with international reference laboratories. If COVID-19 testing capacity does not exist at national level, samples should be sent to a regional or international reference laboratory with appropriate capacity. In the event of widespread community transmission, surge plans should be activated to manage the increased volume of samples from suspected cases. WHO can provide support to access relevant reference laboratories, protocols, reagents, and supplies.

*Source: WHO Operational Guidelines to Support Country Preparedness and Response for COVID-19*

### Ready for Testing Since the Onset of the Pandemic

Laboratory-based surveillance, necessary to monitor COVID-19 disease trends, relies on data produced in clinical and/or public health laboratories. The Americas was the first WHO Region to provide its Member States with laboratory diagnostic kits. Early on, 56 test kits were ordered and distributed to 21 Member States; WHO donated an additional 130 kits to support the diagnostic capacity in the Americas. Throughout the year, PAHO continued to purchase and distribute additional laboratory supplies.

With the initial supplies in hand, PAHO focused on building diagnostic capacity in the Region's National Influenza Centers (NICs) and SARI (Severe Acute

Respiratory Infection) Laboratory network. By the first quarter of 2020, all 35 Member States had the capacity for molecular diagnostic testing for SARS-CoV-2.

PAHO also collaborated with countries to establish a clear algorithm for testing for SARS-CoV-2, building on the existing influenza surveillance systems. PAHO continued to provide guidance on testing strategies, quality assurance procedures, and genomic surveillance. Technical guidance on the interpretation of laboratory results for COVID-19 diagnosis<sup>61</sup> was developed and shared and training was conducted.

In mid- 2020 PAHO released Laboratory Guidelines for the Detection and Diagnosis of COVID-19 Virus Infection.<sup>62</sup> This updated document takes into account

<sup>61</sup> Pan American Health Organization, 2020. Interpretation of laboratory results for COVID-19 diagnosis. Online at: <https://iris.paho.org/handle/10665.2/52138>.

<sup>62</sup> Pan American Health Organization. Laboratory Guidelines for the Detection and Diagnosis of COVID-19 Virus Infection, 2020.

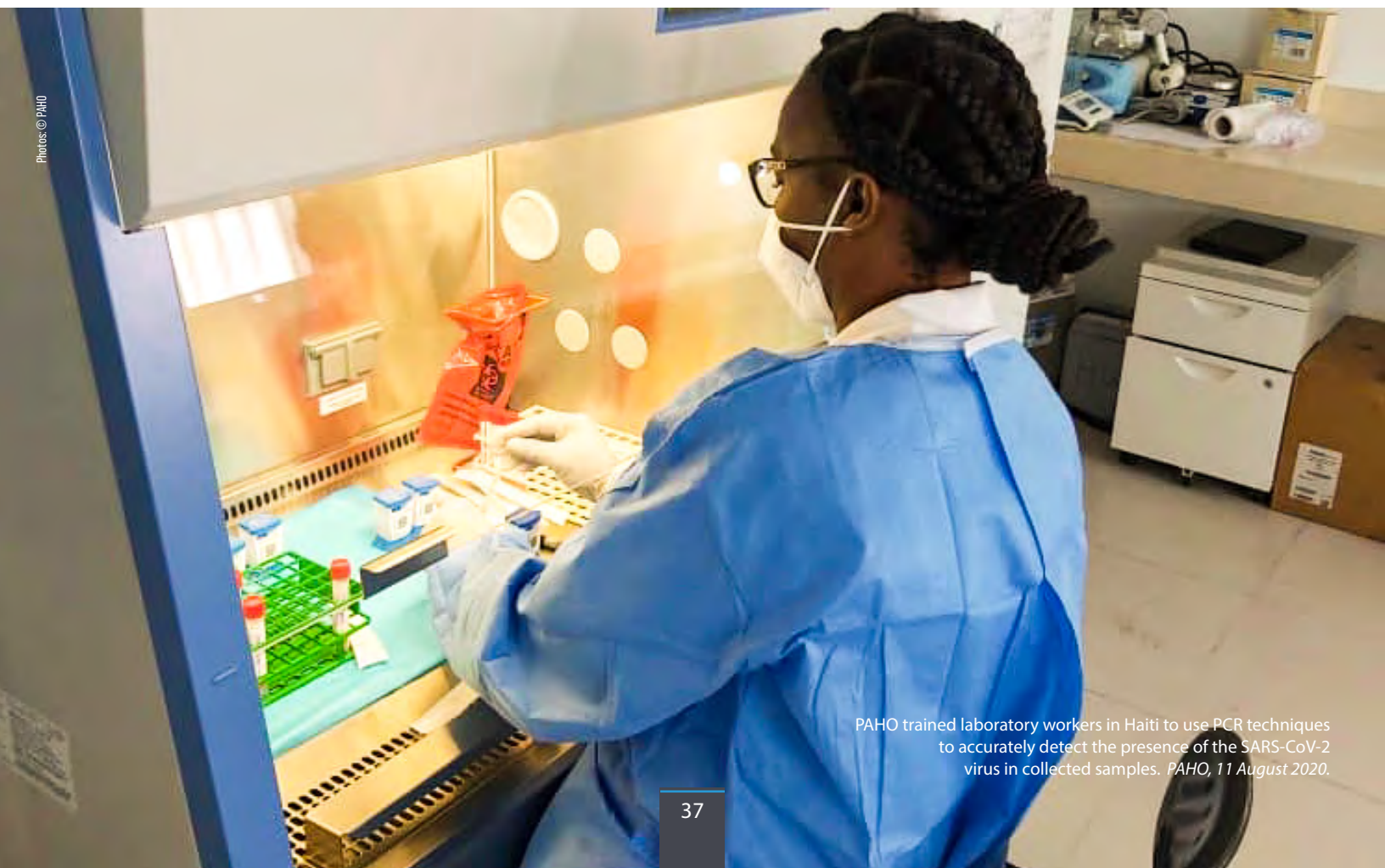
new case definitions for suspected cases and updated WHO guidance for laboratory testing. This information was distributed to the NICs and national public health laboratories across the Americas. PAHO participated in a webinar to disseminate its methodology for molecular diagnosis, including an overview of limitations and how to interpret antibody-based tests. The webinar was co-organized with Council of Ministers of Health of Central America (COMISCA); the U.S. CDC office in Central America; and the Ibero-American Program for Science and Technology for Development (CYTED).

Through regionwide and country-specific training, PAHO has provided virtual workshops on techniques and limitations of virologic and serological assays to

300 laboratory personnel in Bolivia (Plurinational State of). Saint Kitts and Nevis received PAHO guidance on designing the layout of laboratory spaces designated for COVID-19 molecular testing, whereas Grenada was trained to install PCR diagnostics in two health centers. Jamaica received PAHO support to scale up COVID-19 testing and Grenada and Saint Vincent and the Grenadines were trained to use newly acquired PCR machines to conduct molecular detection of COVID-19.

PAHO provided additional data review, troubleshooting sessions and follow up calls on laboratory diagnostics to Antigua and Barbuda, Belize, Bolivia (Plurinational State of), Brazil, Cayman Islands, Chile, Colombia, Costa Rica, Dominica, Dominican

Online at: <https://www.paho.org/en/documents/laboratory-guidelines-detection-and-diagnosis-covid-19-virus-infection>.



PAHO trained laboratory workers in Haiti to use PCR techniques to accurately detect the presence of the SARS-CoV-2 virus in collected samples. PAHO, 11 August 2020.

Republic, El Salvador, Ecuador, Grenada, Guatemala, Guyana, Honduras, Jamaica, Peru, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, and Turks and Caicos Islands.

To maintain and strengthen testing capacities, PAHO supported seven Caribbean laboratories to participate in the WHO External Quality Assessment Program for the detection of influenza viruses, including COVID-19, using polymerase chain reaction (PCR). This allows an external laboratory to monitor the quality and standards of performance of another laboratory and helps laboratories identify any critical issues with their COVID-19 testing.

## Expanding Testing for the Americas

The emergence of SARS-CoV-2 led to an unexpected surge in the global demand for laboratory supplies, causing product scarcity in the market and adding complexity to maintaining the supply chain for in vitro diagnostics (IVDs) using PCR, which is considered to be the most reliable diagnostic test recommended by WHO. However, a range of newly developed rapid diagnostic tests, with varying levels of sensitivity and accuracy, began to flood commercial markets. By the end of 2020, PAHO had provided 21.4 million COVID-19 PCR test to 36 countries and territories through PAHO's Strategic Fund.<sup>63</sup>

PAHO continues to explore possible collaboration with the World Organization for Animal Health (OIE) to expand laboratory capacity. Two webinars were held with veterinary laboratories from 22 countries

to explore how these animal laboratories could supplement existing human laboratory capacity to detect and confirm COVID-19.

## Antigen-based Rapid Diagnostic Tests (Ag-RDT)

Antigen-based rapid diagnostic tests (Ag-RDT) are being used across the globe to expand access to diagnostics. By the end of 2020, PAHO had delivered 370,000 antigen-based rapid diagnostic tests to seven countries, while eight Member States used the Strategic Fund to procure 2.6 million Ag-RDTs. In late December 2020, PAHO delivered 100,000 Ag-RDTs to Mexico for use in the field.

## Training for the Rollout of Ag-RDTs

- PAHO convened technical meetings with health authorities in Ecuador and Venezuela (Bolivarian Republic of) to discuss the implementation of antigen-based platforms. Costa Rica, Honduras, and Mexico received PAHO guidance and considerations as they considered implementing antigen-based platforms for detecting COVID-19 cases.
- Ecuador, Haiti, Honduras, Jamaica, Saint Vincent and the Grenadines, Suriname, and Venezuela (Bolivarian Republic of) received virtual training from PAHO on the rollout of COVID-19 antigen-based rapid diagnostic tests. A train-the-trainer workshop was held with Guyana's national laboratory to prepare for the roll out of Ag-RDTs.

<sup>63</sup> PAHO's Strategic Fund is a regional technical cooperation mechanism for pooled procurement of essential medicines and strategic health supplies. The Strategic Fund strengthens strategic supply management systems, providing technical cooperation to plan demand, guarantee rational use and avoid stock-outs in the countries of the Americas. The products purchased through the Fund meet international standards in safety, efficacy, and quality.

- Costa Rica, El Salvador, Guatemala, Jamaica, Peru, and Trinidad and Tobago received PAHO guidance and considerations as they considered implementing antigen-based platforms for detecting COVID-19 cases. Laboratory technicians in El Salvador and Jamaica in the implementation of Ag-RDTs.
- Technical cooperation was provided to Brazil and Guyana to assess the way forward to apply these tests.

In Ecuador, PAHO reviewed the implementation plan for the antigen-based diagnosis. Training and practical demonstrations on the Ag-RDTs were carried out in Quito and Guayaquil, with laboratory and epidemiology staff. The Organization shared guidance with Argentina, Guyana, and Suriname as they consider implementing these tests.

PAHO participated in a meeting on expansion of the timely access to COVID-19 diagnosis at the primary care level, organized by Costa Rica's Social Security Agency. During this meeting, PAHO presented its Ag-RDT strategy and Costa Rica presented its Ag-RDT implementation plan.

## Technical Guidance for Ag-RDTs

PAHO published a concept note on the implementation of COVID-19 antigen-based detection tests<sup>64</sup> to provide practical guidance to countries in the Americas. The regional team convened two webinars to update countries on the implementation of antigen-based detection.

## Genomic Surveillance

Since the onset of the pandemic, there has been a global effort to sequence SARS-CoV-2 and monitor its evolution. Sequenced genomes from around the world are shared on WHO's Global Initiative on Sharing All Influenza Data Platform (GISAID), an open-access database that shares data freely to researchers to promote better understanding of the virus and contribute to vaccine development. Initially, only three countries in the Region (Brazil, Chile, and Mexico) shared sequences of the strains circulating in their countries. To ensure better representation of the strains circulating in the Americas, PAHO coordinates the COVID-19 Genomic Surveillance Regional Network Project<sup>65</sup> and supports countries to share their genomic sequences.

PAHO continues to collaborate with the Oswaldo Cruz Foundation (Fiocruz) in Brazil, a regional sequencing reference laboratory for COVID-19, to monitor the spread of the virus in the Americas and detect mutations and variants. Resulting data were uploaded to the GISAID database, allowing them to be accessed and analyzed by researchers worldwide. For the latest data, consult [here](#).

Reagents for next generation sequencing (NGS) were delivered to Chile's Institute of Public Health, a regional laboratory of the COVID-19 Genomic Surveillance Network.

PAHO published a technical document SARS-CoV-2 genomic characterization and circulating variants in the Americas,<sup>66</sup> which presented information on the evolution process of the virus and the distribution of genetic groups.

64 Pan American Health Organization. Implementation of Antigen-based Detection Tests. October 2020. Available online at: <https://www.paho.org/en/documents/implementation-covid-19-rapid-antigen-detection-test-pilot>.

65 Pan American Health Organization. COVID-19 Genomic Surveillance Regional Network. Online at: <https://www.paho.org/en/topics/influenza/covid-19-genomic-surveillance-regional-network>.

66 Pan American Health Organization. SARS-CoV-2 genomic characterization and circulating variants in the Region of the America. October 2020. Available online at: <https://www.paho.org/en/documents/technical-note-sars-cov-2-genomic-characterization-and-circulating-variants-region>.

## Working with Partners

- In the context of COVID-19, the Inter-American Development Bank convened a high-level expert session on developing and improving monitoring and surveillance strategies for the 'new normal' for 60 of its staff. PAHO presented on diagnosis and laboratory response.
- To enhance the surveillance of respiratory viruses, PAHO convened the SARInet laboratory meeting in October 2020. The 110 participants were familiarized with techniques to integrate SARS-CoV-2 into existing influenza activities.
- PAHO co-organized and participated in the Expert Consultation on Therapies and Diagnosis of COVID-19, under the Regional Response Framework. During the session, experts from Brazil and Colombia discussed a smart pooling strategy for testing and genomic characterization of possible cases of SARS-CoV-2 reinfection. On the matter of reinfection, PAHO published Interim Guidelines for the Detection of SARS-CoV-2 Reinfection Cases.<sup>67</sup>
- PAHO presented on advances in COVID-19 laboratory testing at a meeting with national public health institutes in the region, convened by the Andean Health Agency (ORAS).
- PAHO worked with the Foundation for Innovative New Diagnostics (FIND) to assess the upcoming rollout of antigen-based tests in the Americas. The Organization also participated in the virtual forum on Developing a Collaborative Research Agenda for SARS-CoV-2 Antigen Rapid Diagnostic Tests, convened by WHO's Access to COVID-19 Tools (ACT) Accelerator.<sup>68</sup>

<sup>67</sup> Pan American Health Organization. Interim Guidelines for the Detection of SARS-CoV-2 Reinfection Cases. October 2020. Available online at <https://www.paho.org/en/documents/interim-guidelines-detecting-cases-reinfection-sars-cov-2>.

<sup>68</sup> Through global collaboration, the Access to COVID-19 Tools (ACT) Accelerator is accelerating development, production, and equitable access to COVID-19 tests, treatments, and vaccines. ACT is organized into four pillars of work: diagnostics, treatment, vaccines, and health system strengthening. Read more at: <https://www.who.int/initiatives/act-accelerator>.

## RESPONSE PILLARS



## Pillar 6. Infection Prevention and Control

Infection prevention and control (IPC) practices in communities and health facilities should be reviewed and enhanced to prepare for treatment of patients with COVID-19, and prevent transmission to staff, all patients/visitors, and in the community.

*Source: WHO Operational Guidelines to Support Country Preparedness and Response for COVID-19*

Infection prevention and control (IPC) is critical to preventing or slowing the dissemination of a new virus with an unclear natural history. Since the onset of the pandemic, PAHO has worked closely with health authorities to reiterate the need for good hand hygiene practices, appropriate and rational use of PPE, the cleaning and disinfection of medical devices, and water and sanitation (WASH).

All countries have implemented measures to reinforce IPC and, as at 31 December 2020, 33 countries reported having a national IPC program and WASH standards in health facilities. In addition to developing and updating guidelines, as at 31 December 2020, PAHO had organized more than 220 virtual/in-person training sessions on testing, contact tracing, care and more.

### Keeping Health Workers and Patients in the Americas Safe

Health workers are on the front lines of medical care for potential and confirmed COVID-19 patients, where, in the process, they put their own safety on the line. PAHO has issued guidelines on care for health workers exposed to COVID-19 in health facilities<sup>69</sup> and provided in-person and virtual training to ministries of health and health workers on:

- The proper use of PPE.
- Technical and regulatory aspects of the extended use, reuse, and reprocessing of respirators during shortages.
- IPC transmission-based measures that health workers can take to reduce the likelihood of

<sup>69</sup> Pan American Health Organization. Care for health workers exposed to the new coronavirus (COVID-19) in health facilities. Interim Recommendations, 13 April 2020. Online at: <https://iris.paho.org/handle/10665.2/52032>.

infection while managing possible and confirmed cases, including in isolation areas in acute healthcare settings and in nontraditional settings such as hotels, motels, shelters, dormitories, and home care.

Between November and December 2020, PAHO provided multi-week IPC training sessions to more than 800 health professionals, logisticians, hospitality workers, and other persons at higher risk of exposure to COVID-19. Targeted countries and territories included Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Sint Maarten, Suriname, Trinidad and Tobago, and Turks and Caicos Islands. These trainings and the recommended IPC measures were tailored to each country's context and the needs of the relevant sector (e.g., health, tourism, transportation, etc.).

## IPC Outside the Health Sector

In a multi-sector initiative to address the COVID-19 pandemic, PAHO developed recommendations for reducing the risk of infection beyond the health sector. In addition to safeguarding the health workforce, the recommendations also focus on persons living in long-term care facilities, workers at points of entry, and the general population seeking guidance on how to avoid COVID-19.

In collaboration with the UN Office on Drugs and Crime (UNODC), PAHO trained 200 maritime law

enforcers from African countries, the Caribbean, and the United States of America on preventing infection as they undertake maritime anti-crime operations.

Health authorities received recommendations on the management of dead bodies to ensure that protocols are in place for the safe and respectful management of cadavers in the context of COVID-19.

As part of the SMART Hospitals initiative, PAHO issued recommendations and other measures that countries can take to retrofit their health facilities so that they are not only resilient to natural disasters but also reduce the risk to patients and staff of becoming infected with COVID-19.<sup>70</sup>

## WASH in the Context of COVID-19

Water, sanitation, and hygiene (WASH) is an important component of reducing the risk of infection and communities, health facilities, and institutions responsible for WASH at different levels of government continue to use the PAHO-issued recommendations.<sup>71</sup>

## Securing PPE in a Competitive Global Marketplace

The global market for PPE is somewhat less limited and competitive than earlier in 2020, although some items are still difficult to procure. Nonetheless, earlier in the year, the shortage of PPE led PAHO to issue technical and regulatory considerations for governments on the extended use, reuse, and reprocessing of N95 masks and equivalent respirators.<sup>72</sup> By the end of 2020, PAHO had delivered 107 shipments of PPE to 34 countries

70 Pan American Health Organization. Retrofit Measures for COVID-19, 10 June 2020. Available online at: <https://iris.paho.org/handle/10665.2/52292>.

71 Pan American Health Organization. Key Recommendations on Water Sanitation and Hygiene: COVID-19, 2020. Available online at: <https://www.paho.org/en/documents/key-recommendations-water-sanitation-and-hygiene-covid-19>.

72 Pan American Health Organization. Technical and regulatory aspects of the extended use, reuse, and reprocessing of respirators during shortages. 10 June 2020. Available online at: <https://iris.paho.org/handle/10665.2/52431>.

and territories, ensuring fewer COVID-19 infections among health workers and patients. These shipments were comprised of 6.39 million gloves; 1.94 million gowns; 36.8 million surgical and respirator masks; and 365,000 pairs of goggles.

The Organization continues to work with ministries of health to estimate needs for PPE, essential medicines, and other supplies, based on epidemiological trends and projections. Analysis and planning are essential to decisions regarding procurement and the subsequent distribution to prioritized areas.

### Reducing Infection in other Contexts

The COVID-19 pandemic has created numerous challenges to countries conducting elections in 2020

or planning for elections in 2021. Given the risks of large groups of people congregating at polling locations, PAHO collaborated with the Organization of American States to formulate recommendations and considerations for electoral authorities who are organizing elections while seeking to keep voters and election workers safe.<sup>73</sup>

At the start of hurricane season in the Caribbean, PAHO provided recommendations and considerations to Member States on how to ensure that shelters are designed to reduce the risk of infection from COVID-19 while still providing safe refuge from natural disasters. This proved especially important when Hurricanes Eta and Iota struck in November 2020 (see more under Pillar 8-Operational Support and Logistics).

<sup>73</sup> Organization of American States. Guidance for Organizing Elections in Times of a Pandemic. 9 July 2020. Available online at: <http://www.oas.org/documents/spa/press/OEA-guia-para-organizar-elecciones-en-tiempos-de-pandemia.pdf>.

## RESPONSE PILLARS



## Pillar 7. Case Management

Health facilities should prepare for large increases in the number of suspected cases of COVID-19. Staff should be familiar with the suspected COVID-19 case definition, and able to deliver the appropriate care pathway. Patients with, or at risk of, severe illness should be given priority over mild cases. A high volume of cases will put staff, facilities and supplies under pressure.

Guidance should be made available on how to manage mild cases in self-isolation, when appropriate. Plans to provide business continuity and provision of other essential health services should be reviewed. Special considerations and programs should be implemented for vulnerable populations (older people, patients with chronic diseases, pregnant and lactating women, and children).

*Source: WHO Operational Guidelines to Support Country Preparedness and Response for COVID-19*

The COVID-19 pandemic has posed challenges in the delivery of health services. Patient care must be coordinated with and integrated into the different levels of complexity (primary, secondary and tertiary care), while ensuring an uninterrupted supply of medicines and devices in all health facilities, including those in remote areas.

All Member States took significant measures to rapidly strengthen their public health systems in the face of the COVID-19 pandemic. These measures included increasing the availability of beds in health facilities; providing essential equipment and human resources to health facilities (see Pillar 9); expanding testing and treatment for COVID-19 in laboratories and health

facilities; providing hygiene kits to governments and PPE to healthcare providers and patients; establishing respiratory clinics; and ensuring continuity of essential health services. PAHO continued to provide countries with technical guidance on recommended case management measures as well as on strategies for expanding health services to provide care to manage upticks in cases.

### Knowledge Translation and Dissemination for Therapeutics for COVID-19

The urgent need for evidence-based measures to respond to the COVID-19 pandemic had led to a rapid

escalation in the number of studies that test potential therapeutic options. More than 200 therapeutic options or their combinations are being investigated in more than 3,000 clinical trials. The vast amount of data generated by these studies must be interpreted quickly so that health personnel and policymakers have the information to make optimal treatment decisions and manufacturers can scale up production and bolster supply chains. Moreover, obtaining a quick answer to whether or not an intervention is effective can help investigators involved in the many ongoing clinical trials to change focus and pivot to more promising alternatives.

PAHO collaborated closely with WHO and other partners and stakeholders to advance clinical research, facilitate the exchange of experiences and expertise of frontline clinicians from across the globe, and to expand knowledge. In addition, the Organization worked with countries in the Region to promote the WHO Global COVID-19 Clinical Data Platform,<sup>74</sup> which serves to collect anonymized clinical data relating to hospitalized, suspected, or confirmed COVID-19 cases. This is part of a global strategy to gain a clearer understanding of the severity, clinical features, and prognostic factors of COVID-19. PAHO supported Belize, Brazil, Colombia, the Dominican Republic, Mexico, Panama, and the Iberoamerican Federation of Intensive Care to utilize this Platform.

To address the evidence gap and strengthen decision-making, PAHO continually updated and compiled the best available evidence on the efficacy and safety of therapeutics for managing COVID-19. Moreover,

providing comprehensive and trustworthy guidance for the optimal care of COVID-19 patients throughout their entire illness, including the post-COVID period, is necessary. Guidance on current evidence-informed case management and therapeutics was made available to all countries and territories through an “Ongoing Living Update of COVID-19 Therapeutic Options: Summary of Evidence.” In the 18th and most recent periodic review, the evidence on 88 therapeutic options was identified, assessed and synthesized for decision-making.<sup>75</sup>

PAHO developed additional evidence-informed guidance for the management of mild, moderate, severe, and critical care of patients with COVID-19 and issued recommendations on the initial care of persons with acute respiratory illness due to COVID-19 in health facilities and on the reorganization of services for patient management. Additional materials and guidance included flowcharts to aid health facilities to manage suspected COVID-19 cases, patient safety, the use of scientifically unproven medicines, and considerations for the reorganization of cancer services. PAHO conducted an expert consultation on COVID-19 therapies and diagnosis with 130 attendees from around the Americas.

Since the onset of pandemic, PAHO has trained more than 70,000 health workers on the various facets of case management and therapeutics. PAHO conducted webinars for networks of health professionals in the Region. In addition to general clinical management considerations, topics included recommended practices for delivering care in ambulatory and hospital settings; how to advance equity and progress toward attaining

74 World Health Organization. Global COVID-19 Clinical Data Platform for clinical characterization and management of patients with suspected or confirmed COVID-19. Online at: <https://www.who.int/teams/health-care-readiness-clinical-unit/covid-19/data-platform>.

75 Pan American Health Organization. Ongoing Living Update of COVID-19 Therapeutic Options: Summary of Evidence. 18 December 2020. Available online at: [https://iris.paho.org/bitstream/handle/10665.2/52719/PAHOIMSEIHCOVID-19200030\\_eng.pdf?sequence=17&isAllowed=y](https://iris.paho.org/bitstream/handle/10665.2/52719/PAHOIMSEIHCOVID-19200030_eng.pdf?sequence=17&isAllowed=y).

the targets of the Sustainable Development Goals (SDGs) during the pandemic;<sup>76</sup> cardiovascular disease; and obstetrics. PAHO also held a forum to facilitate the exchange of experiences in caring for adults with COVID-19 in middle and low-income countries (86 participants from 12 countries).

PAHO has worked with national governments and health authorities to adapt their recommendations and policy options on the clinical management of COVID-19 cases. In Guatemala and Honduras, case management protocols for migrants and other aspects related to their health and wellbeing were looked at in the context of COVID-19.

The Organization also issued guidelines for the critical care of seriously ill adult patients with COVID-19 and issued recommendations on the initial care of persons with acute respiratory illness due to COVID-19. Considering the increased severity of the virus in older persons, PAHO delivered a webinar to facilitate the exchange of experiences in caring for adults with COVID-19 in middle- and low-income countries (86 participants from 12 countries).

Regarding the need for continued blood supplies, PAHO convened a meeting with authorities to provide recommendations on donor eligibility, blood collection, roles and responsibilities, and existing scientific evidence. It reached 610 participants from 17 Spanish-speaking countries and Guyana. PAHO organized a session with local authorities to explain regulatory considerations regarding authorization for use of convalescent plasma to address the COVID-19 emergency. PAHO shared recommendations with the Andean Health Organization (ORAS) on blood availability and collection, the responsibilities of

national health authorities, and existing evidence on the use of convalescent plasma.

PAHO held a webinar with more than 70 head radiologists, medical physicists, and radiographers from the English-speaking Caribbean countries. It focused on the role of imaging for diagnosis and for monitoring the clinical course of patients with COVID-19 infection, as well as IPC practices for radiology departments to reduce cross-infection and protect medical professionals and patients.

PAHO presented its experiences producing rapid response studies within the scope of COVID-19 at the International Forum on Evidence-informed Policy, organized by the Brazil's Ministry of Health, Fiocruz, SUS, and other Brazilian institutions (approximately 500 participants).

## Estimating Needs to Manage COVID-19 Cases

Early in the pandemic, PAHO produced recommendations for the reorganization and expansion of hospital services in response to COVID-19.<sup>77</sup> This information helps to estimate needs for hospital beds and health workers. Other guidance notes support estimating needs for PPE, supplies and medicines. More than 1,000 people nationwide have been trained and support has been provided to complete their own needs assessments for expanding hospital capacity and acquiring essential medicines for the management of patients admitted to intensive care units.

Research to date has identified specific underlying health conditions associated with an increased risk

<sup>76</sup> The webinar recording is available in Spanish here: <https://www.youtube.com/watch?app=desktop&v=WGKEkcVKHIA>.

<sup>77</sup> Pan American Health Organization. Recommendations for the reorganization and expansion of hospital services in response to COVID-19. April 2020. Online at: [https://iris.paho.org/bitstream/handle/10665.2/52244/PAHOIMSPHECOVID-19200028\\_eng?sequence=5](https://iris.paho.org/bitstream/handle/10665.2/52244/PAHOIMSPHECOVID-19200028_eng?sequence=5).

of severe COVID-19. Leveraging existing data on communicable diseases and chronic conditions present in the population of the Americas, PAHO collaborated with the London School of Hygiene and Tropical Medicine / Centre for the Mathematical Modelling of Infectious Diseases to adapt and tailor an existing tool to the context of the Americas, as mentioned under Pillar 3. This tool allows national health authorities to understand the number of individuals at increased risk of severe COVID-19, thus informing the design of possible strategies to shield extremely vulnerable people from infection, manage chronic care conditions, and guide the vaccine allocation for those at highest risk.

## Medical Surge Capacity

The COVID-19 pandemic has created significant stress on national health systems. PAHO issued recommendations for countries to prepare prehospital emergency medical services (EMS)<sup>78</sup> to manage suspected COVID-19 cases and transport them safely to designated hospital facilities if necessary.

When national health systems are stretched beyond capacity, emergency medical teams (EMTs) play a critical role in expanding that capacity. PAHO issued recommendations to facilitate the medical surge capacity through the deployment of EMTs and to select and set up alternative medical care sites

(AMCS).<sup>79</sup> PAHO maintains updated information on the deployment deployed EMTs and AMCS regionwide at the COVID-19 EMT Response hub.

PAHO works with its partners and the regional network of regional EMT focal points to coordinate local responses and compliance with COVID-19 recommendations. PAHO held a coordination meeting with WHO's EMT Global Secretariat to begin planning for a new version of the publication Classification and Minimum Standards for EMTs and COVID-19: Recommendations for EMTs. PAHO also coordinated a consultation with the EMT Non-Governmental Organizations Advisory Network to provide updates on the regional response and to discuss potential deployments.

PAHO's EMT Ignite platform has hosted a number of webinars:

- Good practices related to the incorporation of medical devices in response to COVID-19 (118 participants).
- Operational Support Cycle, Part I: Alert, Activation and Mobilization (60 participants).
- Updates to the ventilation system in EMTs and alternative medical care sites (80 participants).
- EMT Ignite technical webinar for including partner NGOs and the Ministry of Health of Ecuador (111 participants).
- Updates on diagnostic methods for COVID-19 patients (133 participants).

78 Pan American Health Organization. Recommendations: Prehospital Emergency Medical Services (EMS). March 2020. Online at: <https://www.paho.org/en/documents/covid-19-recommendations-prehospital-emergency-medical-services-ems>.

79 Pan American Health Organization. Recommendations for medical surge capacity and deployment of emergency medical teams. Online at: <https://www.paho.org/en/documents/recommendations-medical-surge-capacity-and-deployment-emergency-medical-teams>.

## Regulatory Considerations for COVID-19 Therapeutics, Supplies, and Equipment

National regulatory agencies (NRAs) ensure that robust mechanisms are in place to adapt to a rapidly changing environment as new products become available for treatment, diagnostics, and other COVID-19-related uses. Given the exhaustive resources needed to build strong regulatory agencies, PAHO has shared recommendations, considerations, and evaluations of products for the management of COVID-19, produced by regulatory agencies from the European Union, Australia, and other countries.

Health technology assessments (HTAs) are invaluable in guiding health authorities in the use of technologies relevant to the COVID-19 pandemic. Two hundred and 10 HTAs related to COVID-19 are available on the Regional Database of HTA Reports of the Americas (BRISA)<sup>80</sup> in its COVID-19 section. PAHO also collaborated with the Regional HTA Network (RedETSA) to deliver a webinar, organized by the Dominican Republic's SISALRIL (Superintendency for Health and Labor Risks) and a national newspaper, *Diario Salud*, with 494 participants. Click [here](#) to listen to the recording (in Spanish). PAHO maintains a repository of websites and relevant information, including regulatory information, at the Regional Platform on Access and Innovation for Health Technologies (PRAIS).<sup>81</sup>

PAHO continued to work with its Member States to provide guidance on the use of in vitro diagnostics (IVDs) and other regulatory aspects, taking into account authorizations from WHO's Emergency

Use Listing (EUL) procedures and based on recommendations from eight NRAs worldwide. The Organization also monitored alerts and updates as part of its post-market surveillance on IVDs, ventilators, PPE, and other items in order to provide the most updated, timely information to regulatory authorities. PAHO continued to maintain and update a list of 73 prioritized (or approved under the WHO's EUL) IVDs for proprietary and open platforms. This is complemented with the monitoring of alerts and updates on post-market surveillance from eleven global regulatory agencies.

PAHO launched a network of regulatory focal points for COVID-19 to improve information sharing and enable potential collaborations for the approval and oversight of new products. One hundred country representatives and experts participated and the focal points hold virtual meetings biweekly to discuss relevant issues such as reliance practices during emergencies and clinical trials of COVID-19 products. The Organization released recommendations on crisis management during the pandemic, tailored primarily to regulatory authorities.

Several meetings in the last quarter of 2020 focused on regulatory considerations:

- At the 16th regulatory update meeting with NRAs in the Americas (10 November), 170 participants from 24 countries and agencies<sup>82</sup> met to discuss regulatory pathways for authorization, importation, and post marketing surveillance of COVID-19 vaccines in Canada and the United States of America.

80 Pan American Health Organization. The Regional Database of Health Technology Assessment Reports of the Americas (BRISA).

Online at: <https://prais.paho.org/en/paho-the-regional-database-of-health-technology-assessment-reports-of-the-americas-brisa-reaches-1000-reports/>.

81 Regional Platform on Access and Innovation for Health Technologies. Online at: <https://prais.paho.org/en/home>.

82 Argentina, The Bahamas, Brazil, Bolivia (Plurinational State of), Canada, Colombia, Chile, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Mexico, Peru, Paraguay, Trinidad and Tobago, Suriname, Uruguay, the United States of America, Venezuela (Bolivarian Republic of), and the Caribbean Public Health Agency (CARPHA).

- The 15th meeting regulatory update took place on 5 November with NRAs from 10 countries in the Americas and the Caribbean Regulatory System. PAHO also convened a meeting that day to discuss mechanisms in Member States to manage unregulated, substandard, and counterfeit medical products and discuss considerations for the rapid evaluation of regional and global reporting systems. (Forty-two participants from 16 countries).
- Regulatory experiences and challenges during the pandemic (90 participants from 14 countries). The focus of this session was on registration for clinical trials. Panama received recommendations and guidance from the regional team on counterfeit medicines and the English-speaking Caribbean countries were briefed on regulatory and procurement considerations.
- Critical information on Medical Device Adverse Events. Fifty-five representatives participated from regulatory agencies from 17 countries.
- PAHO produced guidance and recommendations on the Post-authorization Surveillance of Medical Products during a Pandemic Emergency<sup>83</sup> to support regulatory decision-making in pharmacovigilance, technovigilance, and hemovigilance during pandemics. This was in addition to PAHO's fifth update to the List of Priority Medical Devices in the Context of COVID-19,<sup>84</sup> which provided technical descriptions and specifications for the medical devices recommended for case management.
- Twenty countries (61 participants) were trained in regulatory considerations for biomedical equipment, while PAHO provided targeted support

to Belize (for video-laryngoscope and patient monitors), Peru (for antigen tests), and Suriname (for biomedical equipment).

In addition to meetings, PAHO developed a virtual course on Assessment, Selection, Rational Use, and Management of Health Technologies in the context of COVID-19, which was tailored to Caribbean health personnel. The course began in October 2020 and will continue through the end of June 2021. A regional course was developed for 56 participants from 15 Latin American and Caribbean countries, which is hosted on PAHO's Virtual Campus for Public Health.

The regional team provided technical support to Nicaragua regarding specifications for medical devices. Similar support was provided to Panama on voltage stabilizers for oxygen concentrators and to Costa Rica on the regulatory aspects of developing clinical trials of mechanical ventilators.

### Ethics and the Allocation of Scarce Life-Saving Resources

The pandemic has brought bioethics to the forefront because of the challenges in prioritizing scarce resources in the delivery of critical care (e.g., ventilators). Ethics guidance on these challenges was developed and shared with Member States. Advancing justice between countries and within countries in the distribution of therapeutics and vaccines is an ongoing challenge; PAHO's ongoing work on ethical decision-making processes has provided Member States a tool to address it.

83 Pan American Health Organization. Post-authorization Surveillance of Medical Products during a Pandemic Emergency. Online at: <https://iris.paho.org/handle/10665.2/52578>.

84 Pan American Health Organization. List of Priority Medical Devices in the Context of COVID-19. Online at: <https://iris.paho.org/handle/10665.2/52580>.

## RESPONSE PILLARS



## Pillar 8. Operational Support and Logistics

### Logistics During a Global Pandemic

The COVID-19 pandemic created severe interruptions to regular supply chains for medical supplies and equipment, as well as to the commercial flights that PAHO has relied upon in the past to deploy its experts and ship medicines, supplies, and equipment. Countries face a complex market for procuring supplies and medicines related to COVID-19. Quality must always be verified, as the market is flooded with products of dubious quality. PAHO is working tirelessly with other UN agencies, partners, international NGOs, and donors to secure the resources needed to enable countries to prevent infections and mitigate deaths. Through its network and logistical hubs, by the end of December 2020, 38 countries and territories had received tests for molecular detection of COVID-19 and 34 countries and territories received shipments of life-saving PPE.

### Procurement in a Challenging Marketplace

At the regional level, PAHO continued to collaborate with regional, national, and international partners (including other UN agencies) on all matters related to procurement, shipping, freight, logistics, and technical specifications for PPE, oxygen concentrators, in vitro diagnostics, and other goods, supplies, and equipment critical to the COVID-19 response in the Americas.

Considering the multitude of suppliers and concerns about the quality of procured goods, PAHO has made quality assurance a critical component of its technical support to procuring goods, supplies, and equipment. This has entailed reviewing technical specifications, ensuring shipping documentation is correct for clearing goods through customs, and supporting countries with quality assurance issues.

Among other items, PAHO delivered:

- Oxygen concentrators to Antigua and Barbuda, Dominica, Grenada, Guyana, Peru, Saint Kitts and Nevis, Saint Lucia, Suriname, Colombia, Costa Rica, Ecuador, Bolivia (Plurinational State of), Guyana, Jamaica, Paraguay, Peru, Suriname and Honduras.
- Other donations to Cuba, Ecuador, and Paraguay.
- Four tons of PPE to Cuba, Ecuador, Nicaragua, Paraguay, and Venezuela (Bolivarian Republic of).
- Trauma kits and other supplies to Venezuela (Bolivarian Republic of).
- PPE kits to Colombia, Grenada, Haiti, Saint Lucia, and Venezuela (Bolivarian Republic of).
- COVID-19 rapid tests and analyzers to Ecuador

and other humanitarian donations to Bolivia (Plurinational State of), Guyana, Suriname, and Venezuela (Bolivarian Republic of).

- Shipments of COVID-19 rapid tests and analyzers, comprising 15,000 to Guyana, 50,000 to Jamaica, and 100,000 to Mexico.

PAHO continues to support Member States by advising them on current logistical challenges and the market situation regarding stocks of medical supplies and PPE. For example, the pandemic has created challenges to ensuring continuity in the blood supply that health systems rely on. PAHO conducted a webinar to discuss challenges related to coverage, access, and availability of safe blood in the context of the pandemic.<sup>85</sup>

85 Pan American Health Organization. Blood Supply and the Impact of COVID-19. December 2020. Online at: <https://www.campusvirtualsp.org/en/webinar/blood-supply-and-impact-covid-19>.



PAHO delivered personal protection equipment (PPE) to Nicaragua to help reduce the risk of infection among health workers and other persons working in professions at higher risk of infection from COVID-19. PAHO, 2020

The critical need for PPE requires quality assurance processes to ensure that procured items meet necessary specifications and PAHO applied criteria to guide the procurement of PPE and in vitro diagnostic (IVD) tests for COVID-19. PAHO's warehouse of emergency stocks of supplies and equipment continues to assemble COVID-19 PPE kits. PAHO collaborated with the Caribbean Community (CARICOM) and the Caribbean Disaster Emergency Management Agency (CDEMA) to develop a procurement protocol for the consolidated purchase of prioritized medical devices and supplies related to COVID-19 in the Caribbean.

These efforts were made in close coordination with WHO, UNICEF, UNDP, UNOPS, UNFPA, and other agencies in the COVID-19 Supply Chain Interagency Coordination Cell. As an example, PAHO supported the review of technical specifications for UNICEF's procurement of PPE.

### Technical Recommendations on Quality Assurance, Procurement, and Post-market Surveillance

- PAHO provided Venezuela (Bolivarian Republic of) with technical recommendations on the KN95 respirator.
- Costa Rica received PAHO's support to develop an action plan to manage limitations on the availability of PPE. This included support to assess specifications for respirators. In addition, guidance was provided as the country prepared to procure Ag-RDTs.
- Bolivia (Plurinational State of) and Trinidad and Tobago received PAHO guidance on quality assurance considerations for procuring respirator masks and the use of cloth masks at the community level.

- PAHO worked with Bolivia (Plurinational State of), Guyana, Suriname, and Venezuela (Bolivarian Republic of) to conduct post-market surveillance for in vitro diagnostics.

### The Impact of Hurricanes Eta and Iota during a Pandemic

As countries in Central America continue to recover from damage caused by Hurricanes Eta and Iota, PAHO prepared and coordinated two urgent shipments to support the emergency response. In Honduras, PAHO shipped WASH supplies as well as 25,344 units of hand sanitizers for persons displaced in shelters. Meanwhile Colombia received four COVID-19 kits and other WASH supplies.

On 3 November 2020, Hurricane Eta made landfall along Nicaragua's Caribbean coast as a category 4–5 hurricane, with maximum sustained winds near 140 mph (220 km/h). By 6 November, the hurricane had affected at least seven countries in the region, causing multiple landslides and floods, resulting in the obstruction and damage to roads and collapsed electric power, communication and water systems. As a result, multiple communities and their health facilities were left completely isolated and inaccessible.

Scarcely two weeks later, the category-5 hurricane Iota slammed into Central America, severely affecting the same areas already devastated by Eta.

Given the new and urgent needs in the health sector of the affected countries and the need to maintain COVID-19 activities while also addressing the impact of the hurricanes, PAHO's COVID-19 response was adapted to address the situation. The Organization mobilized emergency supplies and medicines from its humanitarian hub in Panama. The team arranged

two shipments of COVID-19 kits, WASH equipment and supplies, and other humanitarian relief supplies to Honduras. Nicaragua received COVID-19 kits to maintain its pandemic response once Eta had passed.

In Guatemala, PAHO supported the deployment of 18 medical teams (doctors, nurses, psychologists, nutritionists, environmental sanitation technicians) to provide support in shelters in the Departments of Alta Verapaz, Quiché, and Izabal. PAHO also supported the mobilization of six health damage and needs assessment teams to the departments of Peten, Quiché, Alta Verapaz, Izabal, and Zacapa. Seventeen clinical modules with equipment, 36 first aid kits, and 1,000 PPE kits were dispatched to the Departments of Alta Verapaz, Quiché, and Izabal.

PAHO mobilized public health and disaster management experts and EMTs to strengthen, support, and coordinate mobilization in Honduras.

The Organization acquired a batch of 40,000 antigen tests and 300,000 PCR tests for the early detection of COVID-19 in shelters. Biosecurity and hygiene supplies were also procured and donated to shelters in the most affected areas, including: 50,000 surgical masks, 40,000 medical gloves, 1,500 gallons of liquid soap, 1,500 gallons of alcohol-based gel, among other critical supplies.

PAHO continued to deliver critical technical cooperation and humanitarian supplies in Central America and Providencia in Colombia following Hurricane Iota. This included the delivery of PPE and addressing the potential heightened risk of infection. The Organization worked with an emergency medical team from Samaritan's Purse, deploying them to Honduras. The procurement process is ongoing to dispatch essential humanitarian supplies from PAHO to the country.



On 16 March 2021 in the indigenous community of Concordia, Colombia, members of a health team look at the vaccination record of a community resident to remind him when he should receive his second dose of COVID-19 vaccine. PAHO, 16 March 2021

## RESPONSE PILLARS



## Pillar 9. Maintaining Essential Health Services during the Pandemic

When health systems are overwhelmed, both direct mortality from an outbreak and indirect mortality from preventable and treatable conditions increase dramatically. Countries will need to make difficult decisions to balance the demands of responding directly to COVID 19, while simultaneously engaging in strategic planning and coordinated action to maintain essential health service delivery, mitigating the risk of system collapse.<sup>86</sup>

*Source: WHO Operational Guidelines to Support Country Preparedness and Response for COVID-19*

### Impacted Health Services

The COVID-19 pandemic has created unparalleled stress on the countries' health systems and services. Many countries are finding that they do not have sufficient health workers to manage the uptick in cases. At the same time, the priority given to managing the pandemic has interrupted other routine health services and programs, including vaccination campaigns, malaria elimination, tuberculosis prevention and control, and noncommunicable diseases. The impact of the pandemic on supply chains has hampered efforts to secure medicines and

supplies for other health issues. PAHO has prioritized the development of guidance and tools to inform countries on how to assess existing resources and formulate strategies to bridge identified gaps without jeopardizing the fight against COVID-19.

The COVID-19 pandemic has demonstrated the validity of the universal health strategy. Far from limiting the response of services to hospital levels, the activation and use of all the resources of the health services network, including the first or primary care level, is critical and essential to addressing the current pandemic. Increasing the resolution capacity

<sup>86</sup> For more in-depth information, consult the WHO publication: COVID-19: Operational guidance for maintaining essential health services during an outbreak. This publication is available online at: <https://www.who.int/publications/i/item/10665-332240>.

of first level of care facilitates public access to health services and continuity of care at community level. PAHO developed a publication on the strengthening the resolution capacity of the first level of care in the response to the COVID-19 pandemic,<sup>87</sup> which was launched during a webinar that attracted for 275 participants from across the Americas.<sup>88</sup>

## Reorganization and Progressive Expansion of Health Services

PAHO worked with countries to assess the readiness of health facilities in more than 500 hospitals (public and private) in 15 countries, using the COVID-19 Hospital Readiness Self-Assessment Checklist. This checklist helped to identify their level of preparedness

for imminent emergency response and to address and prioritize identified gaps. PAHO also used epidemiological models for expanding health services to deal with an increased number of cases, including estimates of needs for human resources and hospital beds. PAHO supported countries to analyze options for reorganization and expansion of hospital services and to share experiences. Considering the need for sustaining and expanding a health workforce, PAHO also developed a checklist for managing human resources for health to respond to COVID-19. The Organization presented three webinars on health systems, with 23 countries participating and sharing their experiences and best practices and published the following documents to support the COVID-19 response:

87 Pan American Health Organization. Considerations for Strengthening the First Level of Care in the Management of the COVID-19 Pandemic. 12 January 2021. Available online at: <https://iris.paho.org/handle/10665.2/53190>.

88 Pan American Health Organization. Webinar: Strengthening the resolution capacity of the first level of attention in the context of the response to the COVID-19 pandemic. September 2020. Available online at: <https://www.paho.org/en/events/webinar-strengthening-resolution-capacity-first-level-attention-context-response-covid-19>.



PAHO shipped life-saving supplies and equipment from its warehouse site in Panama to countries across the Americas. PAHO, 2 November 2020

- Hospital Readiness Checklist for the COVID-19 Response.<sup>89</sup>
- Adapting the First Level of Care in the Context of the COVID-19 Pandemic: Interventions, Modalities, and Scope.<sup>90</sup>
- Reorganization and Progressive Expansion of Health Services for the Response to the COVID-19 Pandemic.<sup>91</sup>
- Recommendations for reorganization and expansion of hospital services in response for COVID-19.<sup>92</sup>

Vaccination programs require continued investments to build upon the significant progress made to date in the Americas. As the Director of PAHO stated in a press briefing, three countries in the Americas - Argentina, Brazil, and Mexico - are currently battling measles outbreaks, as well as dealing with COVID-19 cases.<sup>93</sup> Regarding the operation of immunization programs during the pandemic, PAHO and country teams worked together with health authorities to devise strategies for vaccinating high-risk people against influenza and other diseases.

## Maintaining Essential Services

With fiscal revenues diminishing, governments are severely constrained when it comes to resources to address the pandemic while still maintaining essential services. PAHO is working with ministries of health and other stakeholders to assess how health systems can

continue to operate at levels needed to sustain the gains achieved since the turn of the millennium.

While the priority is to prevent infection, reduce transmission, and provide adequate care and treatment to those with COVID-19, noncommunicable diseases continue to pose the greatest health burden. In the Americas, it is estimated that one in four (220 million) people live with at least one NCD, such as cardiovascular diseases, diabetes, cancer, or chronic respiratory diseases. This population requires access to essential NCD services to ensure the continuity of disease management. Furthermore, people with NCDs and older persons are at higher risk of developing severe COVID-19 disease and dying as a result, making this population highly vulnerable.

According to a recent assessment, outpatient services for noncommunicable diseases continue to be maintained, with limited access in 18 countries (64%) and full access in 7 countries (25%). The main reasons for disruption to NCD services include cancellation of elective care services (14 of 24 countries, or 58%), reallocation of clinical staff to the COVID-19 response (12 of 24, 50%), and patients not presenting (12/24, 50%). Since April 2020, through its Country Offices, PAHO conducted four surveys on routine immunization (IM) services covering 39 countries and territories. It found that routine IM services were maintained in 31 (79%) countries; however, eight countries (21%) experienced partial suspension of

89 Pan American Health Organization. Hospital Readiness checklist for COVID-19 Response. February 2020. Online at: <https://www.paho.org/en/documents/hospital-readiness-checklist-covid-19>.

90 Pan American Health Organization. Adapting the First Level of Care in the Context of the COVID-19 Pandemic: Interventions, Modalities, and Scope. April 2020. Online at: <https://www.paho.org/en/documents/technical-note-adapting-first-level-care-context-covid-19-pandemic-interventions>.

91 Pan American Health Organization. Reorganization and Progressive Expansion of Health Services for the Response to the COVID-19 Pandemic. March 2020. Online at: <https://www.paho.org/en/documents/reorganization-and-progressive-expansion-health-services-response-covid-19-pandemic>.

92 Pan American Health Organization. Recommendations for reorganization and expansion of hospital services in the response to COVID-19. June 2020. Online at: <https://iris.paho.org/handle/10665.2/52244>

93 From a press briefing by the Director of the Pan American Health Organization. Available online at: <https://www.paho.org/en/news/24-4-2020-paho-urges-countries-maintain-vaccination-during-covid-19-pandemic>.

services. Sixty percent of countries have reallocated TB resources to COVID-19, and there is a reduction in the frequency of outpatient visits for drug susceptible TB treatment, up to 86% among multidrug-resistant (MDR) TB patients. HIV treatments have continued uninterrupted despite shortages, thanks to mitigation measures implemented by countries and territories, including support from PAHO through its Strategic Fund.

The regional team met with national authorities (32 participants from 17 countries) and the heads of Latin America's blood programs to analyze measures taken to maintain adequate blood supply during the pandemic.

The Caribbean Subregional Program Coordination convened bi-weekly virtual meetings on mental health and psychosocial support for trained mental health providers, national health authorities, and relevant stakeholders and institutions including CARICOM, CARPHA, CANPA (Caribbean Alliance of National Psychologists Association), and Public Health England. These sessions touched on topics ranging from alcohol abuse to violence against women and girls in the context of COVID-19.

## Specialized Services

### Older Persons

- The theme of the 2020 UN International Day of Older Persons (celebrated 1 October) was: "Pandemics: Do They Change How We Address Age and Ageing?" PAHO issued a press release calling

on countries to adapt health systems to better meet the needs of older adults.<sup>94</sup> Considering the higher risks confronted by older persons during the outbreak of pandemics such as COVID-19, policy and programmatic interventions must be targeted to raising awareness of their special needs. Click [here](#) to read more about this issue.

- PAHO conducted a webinar with ORAS-CONHU (Organismo Andino de Salud—Convenio Hipólito Unanue) to discuss the impact of COVID-19 on older persons (100 participants).
- Additionally, PAHO held a webinar on 26 November on the COVID-19 and Older Persons at the First Level of Care (322 participants in Paraguay).

### Maternal and Child Health

Maternal and child health remain a cornerstone of PAHO's priority focus for the Americas. In addition to the Organization's efforts across the Americas, PAHO worked with health authorities in Mexico to review evidence on implementing strategies to reduce maternal and neonatal mortality relating to COVID-19, collect data on maternal mortality cases in the state of Guerrero, and review training materials for a diploma program on sexual, reproductive, maternal and neonatal health within the framework of COVID-19.

### Mental Health and Psychosocial Support

Mental health and psychosocial support (MHPSS) are critical as health workers undergo continued and sustained stress due to work-related conditions and circumstances.

94 Pan American Health Organization, 2020. Online at: <https://www.paho.org/en/news/30-9-2020-people-over-60-have-been-hardest-hit-covid-19-americas>

- A virtual meeting entitled “The Impact of COVID-19 on Mental, Neurological, and Substance Use Services in the Americas: A Rapid Assessment” focused on the results of a regional survey conducted by the World Health Organization (WHO),<sup>95</sup> in which 130 countries participated. The survey report provides information about the extent of disruption to mental, neurological and substance abuse services due to COVID-19, the types of services that have been disrupted, and how countries are overcoming these challenges.

This meeting provided the opportunity for Colombia, Guyana, and Panama to share their experiences on these subjects.

- PAHO provided recommendations to the Bahamas on expanding acute care services in three hospitals and adjusting workflow and workplace layout to minimize risks of infection.
- PAHO supported Guatemalan hospital managers to use the health services needs analysis tool to estimate the capacity to expand the number of hospital beds.

## Research, Innovation, and Development

Although much has been learned about the SARS-CoV-2 coronavirus over the past year, clinical studies are ongoing across the globe and scientific papers are being published at a rapid pace. PAHO has prioritized the assessment of evidence coming from research studies and has synthesized emerging evidence to help ministries of health make decisions based on available evidence. With WHO leading three global studies, Unity, Solidarity I, and Solidarity II, PAHO is working with health and regulatory agencies to ensure that countries are prepared to undertake these studies.

### Helping Countries Navigate Emerging Evidence

PAHO has provided Member States with updated guidance, information, and technical advice on scientific evidence, advancements in laboratory

diagnosis, clinical management, and therapies as new studies are published. As such, the Organization has conducted rapid reviews of literature on key topics to contribute to an evidence base to combat the virus. PAHO has launched a COVID-19 Technical Database<sup>96</sup> to further support countries and territories in the Americas and international partners with evidence-based information on science and technologies. This is the result of partnerships with WHO, Cochrane, McMaster University, Epistemonikos, and other partners. This database is updated regularly with published technical guidelines, scientific publications, and ongoing research protocols, and is available to the public.

PAHO also maintains an updated document on potential COVID-19 therapeutics,<sup>97</sup> the product of a series of rapid systematic reviews of the evidence backing the relevance of drugs for treating COVID-19

<sup>95</sup> World Health Organization. The impact of COVID-19 on mental, neurological and substance use services. October 2020. Available online at: <https://www.paho.org/en/documents/impact-covid-19-mental-neurological-and-substance-use-services>.

<sup>96</sup> See more at <https://covid19-evidence.paho.org>.

<sup>97</sup> Pan American Health Organization. Ongoing Living Update of Potential COVID-19 Therapeutics: summary of rapid systematic reviews. Available online at: <https://www.paho.org/en/documents/ongoing-living-update-potential-covid-19-therapeutics-summary-rapid-systematic-reviews>.

patients. This includes the use of chloroquine and hydroxychloroquine to treat COVID-19 cases (concluding that those medications should not be used for managing COVID-19 patients), as well as other topics including COVID-19 patients with hypertension and risk of death, corticosteroid therapy, convalescent plasma, IL-6 and lung disease, interferon beta-1a for patients with moderate to severe acute respiratory distress syndrome, and potential drug treatments (Remdisevir, Gavipavir, Umifenovir, Danoprevir, Nelfinavir, Darunavir, Meplazumab, and Siltuximab).

PAHO and the UN Economic Commission for Latin America and the Caribbean (ECLAC) convened a dialogue (7 December)<sup>98</sup> with the Region's health, industry, and science and technology sectors to discuss access to medical products and other health technologies during emergencies. This virtual event hosted 163 participants from 26 countries. PAHO Jamaica provided support to the Ministry of Health and Wellness' Essential National Health Research Committee to develop research projects on: (i) the impact of COVID-19 on the access to essential health services; and (ii) the impact of COVID-19 on communication and community engagement.

## Ethics and COVID-19 Research

Member States established (and are widely using) procedures for the rapid ethics review of COVID-19-related research (which was almost entirely

non-existent in the Region before early 2020).

The procedures are based on strategic guidance to streamline the ethics review and oversight of COVID-19 research<sup>99</sup> and a template and operational guidance for ethics review committees, developed by PAHO.<sup>100</sup> PAHO also issued guidelines to promote transparency in research, highlighting specific actions that national authorities can take during a pandemic, and new guidelines on ethics oversight of COVID-19 research<sup>101</sup> in response to rapidly emerging evidence.<sup>102</sup> In October, PAHO convened a workshop on COVID-19 vaccine research ethics; it reached more than 400 participants from the Americas and has 3,000 additional views in YouTube.

One of the most salient ethical challenges the Region faces pertains to the emergency use of interventions that are unproven outside of research. PAHO developed guidance, which is being used globally, on how to proceed ethically in these circumstances.<sup>103</sup>

The regional team continued to support countries on matters related to the ethics of the COVID-19 response and the implementation of the Organization's ethics guidance. PAHO has participated at numerous sessions on ethical challenges posed by COVID-19, at the request of national health authorities and key institutions of Argentina, Belize, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Honduras, Mexico, Panama and Peru; and has supported

98 Pan American Health Organization. PAHO and ECLAC seek to improve the supply of medical products during emergencies in Latin America and the Caribbean. Online at: <https://www.paho.org/en/news/7-12-2020-paho-and-eclac-seek-improve-supply-medical-products-during-emergencies-latin-america>.

99 Pan American Health Organization. Guidance and strategies to streamline ethics review and oversight of COVID-19-related research, 7 April 2020. Online at: <https://iris.paho.org/handle/10665.2/52089b>.

100 Pan American Health Organization. Template and operational guidance for the ethics review and oversight of COVID-19-related research, 15 April 2020. Online at: <https://iris.paho.org/handle/10665.2/52086>.

101 Pan American Health Organization. How Can Research Transparency Be Promoted? Actions for National Health Authorities During the COVID-19 Pandemic. September 2020. Online at: <https://iris.paho.org/handle/10665.2/52768>.

102 Pan American Health Organization. Guidance for Ethics Oversight of COVID-19 Research in Response to Emerging Evidence. November 2020. Online at: <https://iris.paho.org/handle/10665.2/53021>.

103 Pan American Health Organization. Emergency Use of Unproven Interventions Outside of Research. Ethics Guidance for the COVID-19 Pandemic, 25 June 2020. June 2020. Online at: <https://iris.paho.org/handle/10665.2/52429>.

Argentina, Brazil, Costa Rica, Ecuador, Panama and Peru to address ethical issues raised by the pandemic.

The pandemic has stressed the need for strong research ethics systems. PAHO has supported Bolivia (Plurinational State of), Guatemala, Honduras, Peru, and Trinidad and Tobago to develop policies to establish ethics systems capable of addressing the needs posed by COVID-19. The pandemic has also highlighted the need to engage the public in the ethics of research. PAHO has thus developed communication tools for the broader population, such as an infographic,<sup>104</sup> social media cards (<https://bit.ly/3ddBqXU>), and videos on the importance of ethical research in the COVID-19 response, and has also facilitated the dissemination of related WHO materials in the Americas.<sup>105 106</sup>

The PAHO Ethics Review Committee (PAHOERC) has further supported WHO's COVID-19 ad hoc Ethics Review Committee on procedures for ethics review and, in collaboration with BIREME, on the use of the PAHO-developed ProEthos platform for ethics review.

### Dialogues on Research Ethics

PAHO conducted a series of dialogues on the challenges and lessons to learn from research ethics during the pandemic. More than 1,000 persons participated in the

dialogues. The following summary provides an overview with links to the video content of each dialogue.

- First dialogue: Strategies for ethics review and oversight (3 November 2020), featured experiences from national authorities in Argentina, Brazil, Panama, and Peru.<sup>107</sup>
- Second dialogue: Research Ethics Committee (REC) Procedures (10 November 2020), focused on procedures that have been adopted by committees from Barbados, Costa Rica, Guatemala, and Peru for the ethics review of COVID-19 research.<sup>108</sup>
- Third dialogue: Social and scientific value, and informed consent (17 November 2020), featured experiences from national authorities from Argentina, Brazil, Chile, and Trinidad and Tobago.
- Fourth dialogue: The Perspective of researchers (24 November), featured COVID-19 researchers from Argentina, Brazil, Colombia, and Mexico.<sup>109</sup>
- Fifth dialogue: The risk-benefit assessment of studies (1 December 2020) featured members from research ethics committees from Argentina, Colombia, El Salvador, and Mexico.<sup>110</sup>
- Sixth and final dialogue: What have we learned so far? (9 December 2020), focused on lessons learned to date and featured experts from Argentina, Chile, Grenada, and Peru.<sup>111</sup>

104 See <https://www.paho.org/en/documents/infographic-ethics-research-10-key-points-about-research-during-pandemic>.

105 See <https://www.paho.org/es/bioetica/videos-sobre-investigacion-etica>.

106 See <https://who.canto.global/s/QFV49?viewIndex=0&from=curatedView&display=curatedView>.

107 Pan American Health Organization. Dialogues about research ethics during the pandemic: Challenges and lessons to learn in Latin America and the Caribbean: First dialogue: Strategies for ethics review and oversight. Online at: <https://www.paho.org/en/events/first-dialogue-strategies-ethics-review-and-oversight>

108 Pan American Health Organization. Dialogues about research ethics during the pandemic: Challenges and lessons to learn in Latin America and the Caribbean: Second dialogue: REC procedures. Online at: <https://www.paho.org/en/events/second-dialogue-rec-procedures>.

109 Pan American Health Organization. Dialogues about research ethics during the pandemic: Challenges and lessons to learn in Latin America and the Caribbean: Fourth dialogue: The perspective of researchers. Online at: <https://www.paho.org/en/events/fourth-dialogue-perspective-researches>

110 Pan American Health Organization. Dialogues about research ethics during the pandemic: Challenges and lessons to learn in Latin America and the Caribbean: Fifth dialogue: The risk-benefit assessment of studies. Online at: <https://www.paho.org/en/events/fifth-dialogue-risk-benefit-assessment-studies>

111 Pan American Health Organization. Dialogues about research ethics during the pandemic: Challenges and lessons to learn in Latin America and the Caribbean: Sixth dialogue: What have we learned so far?

## The Americas in Research Studies

From the start, PAHO and its Member States integrated research and development into the pandemic response. A coordinated Global Research Roadmap was created to accelerate research that can lead to evidence needed to strengthen the response. The scientific community has focused on developing and/or repurposing medicines that can target SARS-CoV-2 and help control the pandemic and Member States are funding and promoting research from a variety of disciplines. PAHO led an assessment of the landscape of COVID-19 studies in Latin America and the Caribbean<sup>112</sup> on the basis of the trials registered in WHO's International Clinical Trials Registry Platform (ICTRP). However, countries also have conducted a substantial number of studies that are not clinical trials and thus are not included in ICTRP. PAHO has, therefore, conducted a scoping review of different types of COVID-19 research in Latin America and the Caribbean and will publish the results soon.

## The Solidarity Trial

Early on, the World Health Organization and partners launched an international clinical trial known as 'Solidarity' to help find effective treatments for COVID-19.

As at 2 October 2020, over 12,000 adults had been randomized in 405 participating hospitals worldwide. The Solidarity Trial is ongoing in 30 countries among the 43 countries that have approvals to begin recruiting. The Solidarity Trial evaluated the effect of drugs on three important outcomes in COVID-19 patients: mortality; need for assisted ventilation; and duration of hospital stay. The trial found that Remdisevir, hydroxychloroquine, lopinavir, and interferon regimens had little or no effect on hospitalized patients. In the Americas, the following countries recruited patients for the clinical trial: Argentina, Brazil, Colombia, Honduras, and Peru.<sup>113</sup> Additional information on evolving developments regarding the Solidarity Trial can be found at WHO's website.<sup>114</sup>

As countries participated in clinical trials for candidate vaccines for COVID-19, PAHO also supported the development of the Seroepidemiology Study Solidarity II and worked with countries to conduct sero-epi investigations (known as WHO Unity Studies). Eighteen of the 105 countries that have expressed interest in participating in the Unity Studies are from the Americas.

Available online at: <https://www.paho.org/en/events/sixth-dialogue-what-have-we-learned-so-far>.

112 Available online at: <https://pubmed.ncbi.nlm.nih.gov/33406166/>.

113 Pan American Health Organization. "Ministries of health from selected countries begin preparations for the WHO "Solidarity" clinical trial for COVID-19 vaccines." October 2020.

Online at: <https://www.paho.org/en/news/1-10-2020-ministries-health-selected-countries-begin-preparations-who-solidarity-clinical>.

114 World Health Organization. "Solidarity" clinical trial for COVID-19 treatments. Online at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov/solidarity-clinical-trial-for-covid-19-treatments>.

# The Road Ahead

By the end of March 2021, the Americas had reported close to 56 million cases of COVID-19, approximately 44% of the global burden to date. Tragically, close to 1.34 million people in this Region have succumbed to this disease. Recent epidemiological trends show that the virus remains a serious threat to public health in this Region. Many of health workers (70% being women) have borne the brunt of this pandemic as they continue to work tirelessly, despite exhaustion and a higher risk of infection. Meanwhile, those facing barriers to health access as well as national public safety nets face an uncertain outlook, even as some economies and borders cautiously reopen.

There is, however, hope on the horizon. The WHO has listed four COVID-19 vaccines for emergency use and other vaccine candidates are undergoing review as more clinical data from trials are made available. Through the COVAX Facility, more than 2.5 million doses have been delivered to 17 countries in the Americas. Meanwhile, over 141 million people have received at least the first dose of a COVID-19 vaccine by the end of March 2021, either through direct arrangements with manufacturers, donations, or the COVAX Facility.<sup>115,116</sup>

The supply of vaccines will remain limited for the coming months. As such, countries will need to sustain a range of effective strategies to keep the spread of the virus at bay, including maintaining social distancing measures, strengthening health systems, and reinforcing surveillance for COVID-19 cases as well as variants of concern.

The Pan American Health Organization will continue to provide its Member States with the technical guidance, expertise, and evidence-based recommendations needed to prevent infections and provide effective care. Lastly, PAHO is committed to continue supporting this Region to access and procure COVID-19 vaccines through the Revolving Fund for Vaccine Procurement and provide technical cooperation to successfully implement, monitor, and assess the safety and impact of COVID-19 vaccines. PAHO remains certain that for this Region, united by the spirit of Pan-Americanism and partners at all levels, control of the pandemic is within reach.

116 Pan American Health Organization. COVAX Vaccines COVID-19 Deliveries in the Americas. Online at: <https://app.powerbi.com/view?r=eyJrIjoibWVudC5ZDAxMmEtYTIjNC00M2I0LWE5MjUtYVQzZGQxNDc4OTdhliwidCI6ImU2MTBINzljLTJlYzAtNGUwZi04YTE0LTFINGlxMDE1MTImNyIsImMiOiR9>

117 Pan American Health Organization. COVID-19 Vaccination in the Americas dashboard. Online at: [https://ais.paho.org/imm/IM\\_DosisAdmin-Vacunacion.asp](https://ais.paho.org/imm/IM_DosisAdmin-Vacunacion.asp)

# COVID-19 Country Reports

## Antigua and Barbuda



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

- Collaborated with partner United Nations agencies (UNDP, UNICEF, and UNOPS) to procure medical equipment for health facilities treating COVID-19 cases.
- Launched consultations with national health authorities on the development of country strategic preparedness and response plans according to WHO guidelines.
- Continued publication of the COVID-19 information bulletin including measures taken by countries to contain the spread of the virus and highlights PAHO support to countries.
- Maintained the Country Office's Incident Management System Team structure and adapted the members' roles to the WHO SPRP pillars to facilitate implementation and reporting.
- Facilitated coordination with the United Nations Resident Coordinator (UNRC) system on COVID-19 initiatives.



### Risk communication and community engagement

- Delivered virtual training in psychological first aid for healthcare workers (HCWs), community leaders, teachers, and hotline workers to provide mental health and psychosocial support to strengthen individual and community resilience.
- Provided technical support for the development of risk communication materials for HCWs and the general population.
- Produced and distributed posters and booklets on preventive public health measures.
- Produced five-part television series and public service announcements (PSAs) for radio on coping with COVID-19, addressing stigma and fear.
- Purchased equipment to strengthen the country's Health Promotion Unit.
- Produced a video highlighting the contributions and issues faced by healthcare workers in the COVID-19 response.



### Surveillance, rapid response teams, and case investigation

- Disseminated technical guidance on COVID-19 surveillance, including case definitions.
- Worked with health authorities to ensure that their surveillance systems were calibrated with COVID-19 case definitions; introduced data collection tools (e.g., Excel line listing, revised case reporting form).
- Provided orientation on Go.Data, the WHO contact tracing software for capturing data and monitoring the chain of transmission.
- Provided orientation on EpiEstim and CovidSIM, mathematical models for short-term forecasting of cases.

- Provided guidance to national epidemiologists and laboratory personnel on the PAHO regional program for influenza laboratory-based surveillance for SARI/ILI and its link to COVID-19.
- Provided a vehicle to national authorities to strengthen surveillance and contact tracing.
- Provided tablets and a desktop computer for strengthening surveillance, contact tracing, and data collection.
- Trained medical doctors and other health professionals on WHO guidelines for ICD-10 coding of COVID-19 mortality.



### Points of entry, international travel, and transport

- Provided communication materials, including banners, to raise awareness about COVID-19 among travelers and officers at points of entry.
- Reviewed entry protocols for the reopening of borders as they became available and provided feedback to national health authorities as appropriate.
- Provided necessary equipment, e.g., thermal imagers and IT tools for data collection, to strengthen infrastructure for case detection at points of entry.
- Conducted a webinar on "Considerations for resuming non-essential travel in the Caribbean."



### National laboratories

- Disseminated guidelines and protocols for COVID-19 testing.
- Procured and distributed sample collection materials, RT-PCR enzymes, extraction kits and consumables.
- Trained laboratory staff from the national health laboratory to test for COVID-19, using open platforms for molecular diagnostics.
- Ensured laboratory capacity to detect COVID-19 cases by providing tests and reagents and to scale up capacity as more cases were detected.
- Conducted a webinar on scaling up laboratory testing in the Caribbean.
- Jointly collaborated with the regional team to establish an emergency stock of COVID-19 laboratory materials for distribution to countries and territories in the sub-region.
- Facilitated training by the regional team on molecular testing to establish on-island testing capacity.
- Delivered test kits and critical material to implement the reference protocol for SARS-CoV-2. This is the first time that Antigua and Barbuda's national laboratory has installed capacities for PCR laboratory testing.
- Supported the strengthening of laboratory capacity for diagnosis of SARS-CoV-2 by providing 120 GeneXpert cartridges.
- Disseminated updates on COVID-19 diagnostics, including recommendations for use of rapid antigen tests.



## Infection prevention and control

- Provided PPE and supplies for healthcare workers to keep them safe as they respond to the pandemic.
- Trained HCWs in IPC techniques and trained nurses, doctors, and surveillance officers to safely and appropriately use PPE.
- Provided handwash and hand sanitizing stations to health care facilities as part of ongoing support for protection of HCWs



## Case management

- Provided technical support for the development of an isolation unit in acute healthcare settings.
- Improved local health system capacity and protected healthcare workers to safely detect and deliver healthcare services.
- Provided training in critical care management of COVID-19 patients to personnel from the nursing fraternity.
- Procured six vital signs monitors, six IV infusion pumps, three ventilators, and five oxygen concentrators to augment capacity for management of COVID-19 cases.



## Maintaining essential health services during an outbreak

- Worked with the national immunization program to ensure continuity in vaccinations during the COVID-19 pandemic; created a forum to exchange experiences and challenges in adjusting the delivery of immunization services.
- Provided training on the use of WHO/UNICEF's annual Joint Reporting Form (JRF) and the new monthly reporting system for vaccines.
- Supported the promotion of breastfeeding during the pandemic, including an address by the Minister of Health; visual displays at wellness centers; dissemination of information through health talks; online ads on social media platforms; celebrating and recognizing breastfeeding moms training for staff and couples, call-in radio programs, and reactivation of breastfeeding support groups. PAHO also produced six videos, for dissemination on social media, targeting mothers, their families and health care professionals, using identifiable members of the local community whose messages would resonate with various segments of the population.

- Supported a panel discussion on gender-based violence and men's health to discuss how the pandemic influenced the risk of intimate partner violence. This session, with 72 participants, was held at night to facilitate the participation of men.
- Convened a virtual campaign to support the annual Vaccination Week in the Americas.
- Provided guidance and training for caregivers and family members of children with disabilities on care during the COVID-19 pandemic.
- Convened a Young People's Dialogue and a COVID-19 awareness webinar for youth leaders.
- Provided mental health and psychosocial support to HCWs by a dedicated psychologist.
- Procured a vehicle for use by the community mental health team to strengthen the outreach of mental health services.
- Strengthened the capacity of vector control programs to prevent outbreak of dengue during the COVID-19 pandemic, by providing insecticide application equipment, insecticides, and entomological supplies.
- Provided capacity building for healthcare workers on the Mental Health Gap Action Plan.



## Preparing for the vaccine rollout

- Conducted training sessions on: Events Supposedly Attributable to Vaccination or Immunization (ESAVI) and cold chain management.
- Provided technical support for the development of COVID-19 National Vaccination and Deployment Plan and supported the use of VIRAT, the Vaccine Country Readiness Assessment tool.

# Argentina



## Country-level coordination, planning, and monitoring

- Participated in the Argentinian International Humanitarian Network (RHIA), established in March 2020, to respond to emergencies, together with the United Nations system and civil society actors that make up the health cluster. RHIA coordinated the response to emergencies due to drought and food crisis in native villages in the Gran Chaco area.
- Created the COVID-19 network of coordinators, with delegates from each agency, fund, and United Nations program, to provide advice and training for staff and a group of ad hoc physicians to support United Nations staff by providing counseling for cases and aspects related to vaccination.
- Undertook a technical review of all COVID-19 documents prepared by the United Nations system in Argentina.
- Transmitted technical information (provisional guidelines, recommendations, protocols, and methodologies) to counterparts at the national and subnational levels, enabling them to adapt the material to their context and incorporate it, where appropriate, into existing protocols, instruments and approaches.
- Supported the purchase of COVID-19 supplies through PAHO's Strategic Fund and managed the WHO partner platform in Argentina.
- Advised on the development of a strategic plan 2020-2024, including on COVID-19 and human resources for health.
- Contributed to the development of a new digital version of the Argentine Journal of Public Health, in the context of the pandemic, to disseminate scientific evidence on COVID-19.



## Risk communication and community engagement

- Provided pandemic training to more than 600 national and provincial journalists and to journalists from 65 municipal communication teams.
- Collaborated with United Nations agencies, funds, programs in Argentina to incorporate an ethnic-racial approach to the communication component of infection prevention and control in the context of COVID-19 for Afro-descendants, Roma and other groups such as migrants, refugees, the incarcerated, older people, geriatrics; printed and distributed these materials in Argentina.
- Collaborated in the implementation and dissemination of the campaign to promote blood donation in the context of COVID-19, together with the Ministry of Health (MOH) and the office of the Presidency.
- Developed messages for contact tracing, adapted to the general population and health workers.



## Surveillance, rapid response teams, and case investigation

- Incorporated the WHO tool Go.Data into the national surveillance system to support the contact tracing. Together with the MOH, trained Argentina's epidemiology teams (370 workers from 19 of 24 provinces) and helped develop seven guides on using Go.Data.
- Evaluated the current state of providing COVID-19 telehealth services in 547 public health departments in 23 provinces and in Buenos Aires.
- Supported the government to establish a new sentinel surveillance system with five sentinel centers for influenza and other respiratory viruses, including COVID-19.
- In coordination with the National Center for Community Organizations (CENOC), mobilized six NGOs working with vulnerable groups to help implement COVID-19 ("DetectAR") case detection, surveillance and contact tracing strategy.
- Trained epidemiology professionals to use the EpiEstim tool to calculate the virus' effective reproductive rate and CovidSIM to predict how it will spread, taking into account public health measures and the health system.
- Provided advice to health authorities in the provinces of Córdoba and Jujuy in analyzing excess mortality and COVID-19-related comorbidities.
- Hired 10 professionals (epidemiologists, hospital engineers and architects, information systems engineers) to provide direct support to the MOH anti-pandemic response.
- Mapped research and innovation initiatives on COVID-19 in which the country is participating, together with the health research directorate of the MOH.
- Published a section on COVID 19 research and innovation initiatives in the Argentina 2020 Basic Indicators.<sup>1</sup>
- Trained 50 health professionals in Buenos Aires on human resources for health policies in the context of the pandemic.



## Points of entry, international travel, and transport

- Considered recommendations to reopen entry points in the context of COVID-19, in coordination with the Secretariat of Foreign Affairs and the PAHO/WHO focal point for the International Health Regulations (IHR).



## National laboratories

- Provided the first PCR kits and inputs to train more than 100 subnational laboratories in the 24 provinces, as part of a decentralized and expanded laboratory testing network.
- Donated enzymes and primers to the national laboratory network for PCR diagnostic testing.
- Donated Ag-RDT tests for use at the primary care level.

1 Pan American Health Organization. Indicadores Básicas de Argentina, 2020. Online at: <https://iris.paho.org/handle/10665.2/53210>.



## Infection prevention and control

- Trained 300 nurses countrywide and hospital psychiatric staff and managers on infection prevention and control best practices.
- Trained indigenous and other health workers (including nurses) on COVID-19 infection, prevention and control at the subnational level.
- Provided guidance to the directorate of water and sanitation and the Ministry of Public Works to ensure water quality during the pandemic.
- Together with the MOH, trained staff from the Argentine Network of Municipalities Fighting Climate Change on waste management in the context of COVID-19.
- Supported the development of an instrument to certify the quality and safety of primary care in the context of COVID-19.



## Case management

- Trained national and subnational teams to use PAHO tools to calculate the needs related to PPE, medical staff, supplies and equipment to handle the expected cases of COVID-19.



## Operational support and logistical aspects

- Shared information about SUMA, PAHO/WHO's humanitarian supply management system, with multisectoral professionals in Santa Fe province.
- Supported the mobilization of health coordinators at the subnational level.



## Maintaining essential health services in an outbreak

- In the context of the pandemic, supported the MOH to develop guidelines on mental health; NCDs; immunization; maternal, child and adolescent health; older adults; and breast, cervical and colorectal cancers.



## Preparing for the vaccine rollout

- Worked with the National Immunization Commission to share information about the COVAX Facility as a means of accessing COVID-19 vaccines.
- Supported Argentina to develop a COVID-19 strategic vaccination plan and complete the vaccine country readiness tool.
- Provided training on the cold chain; syringes and disposable materials; and vaccine preparedness, registration and safety.



## Bahamas



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

- Provided on-going technical advice and operational support to develop public health and COVID-19 outbreak prevention and control policies, e.g., for clinical management, IPC, disease surveillance, quarantine/isolation/follow up of cases and contacts, mental health and psychosocial support (MHPSS), travel, employers, schools, and social support for vulnerable groups (e.g., urban poor, migrants, homeless, unemployed, older people, persons with disabilities, persons deprived of their liberty, and other institutionalized groups).
- Supported the Ministry of Health (MOH) in their efforts to mobilize financial and technical support for the COVID-19 response from other United Nations agencies, foreign missions, public sector and civic society groups.
- Advised on legislative policies, strategies, and considerations on mental health and psychosocial support, and social support for vulnerable groups, as noted above.
- Participated in discussions with the Prime Minister, Cabinet, Opposition, and Chamber of Commerce on COVID-19 situation, links with public health and economy, and options for strengthening public health response.



### Risk communication and community engagement

- Supported national authorities to develop and roll out their risk communication strategies and products through press conferences, town hall meetings, radio/TV interviews, and social media to reach all Bahamians.
- Provided occasional logistical support to the MOH for preparation and printing of communication products.
- Collaborated with the IOM and MOH to prepare Haitian Creole-language communication products for use with the Haitian migrant community.
- The PAHO Representative participated in periodic press conferences, town hall meetings, and radio/TV interviews.
- Developed new corporate risk communication and public education products (mental health, cyber safety for children, prevention of gender-based violence and substance abuse, parenting during COVID-19, and COVID-19 quarantine/isolation tips) for dissemination through PAHO social media platforms and via local mass media and partner agencies.



### Surveillance, rapid response teams, and case investigation

- Assigned an epidemiologist for three months to support the MOH in disease surveillance and data management for COVID-19.
- Worked with the MOH to adapt PAHO/WHO guidelines on epidemiological surveillance, contact tracing, case isolation, and quarantine of contacts to the context of the Bahamas.
- Supported the MOH in data management and reporting, including use of Go.Data, the WHO contact tracing tool.
- Provided technical assistance to review medical records to assist with the classification of deaths.
- Provided financial support to produce videos to be used in an on-line contract tracing course for collaborative project with University of the Bahamas and the MOH.
- Supported the modeling of the trends of the two waves of the COVID-19 outbreak in Bahamas.



### Points of entry, international travel, and transport

- Provided recommendations for appropriate IPC measures at points of entry and trained staff working at these points (airport, harbor).
- Contributed to the preparation of materials on the health risks of COVID-19, for use at points of entry.



### National laboratories

- Strengthened laboratory capacities through training and provision of enzymes, controls, primers, and RNA extraction kits to support testing for COVID-19.
- Strengthened the National Reference Laboratory by providing training, reagents, enzymes, controls, primers, and RNA extraction kits to support testing for COVID-19.
- Donated two GeneXpert machines and 1,800 tests for expansion and decentralization of laboratory testing capacities in response to the surge in cases.
- Supported the establishment of a laboratory sub-committee in the EOC to discuss and resolve issues related to operations, surveillance, and reporting for COVID-19 antigen testing.



### Infection prevention and control

- Supported the MOH with access to WHO and PAHO IPC and clinical management guidelines and online training resources.
- Provided guidance to the MOH to develop Standard Operating Procedures (SOPs) for IPC.
- Collaborated with the MOH on investigation into risk factors associated with infections among health workers.
- Offered an online IPC course (total of 20 hours over 10-12 weeks) for 36 healthcare personnel from primary health care clinics and hospitals.



## Case management

- Provided modular units that have been adapted to expand isolation and triage capacity in two hospitals.
- Assisted the MOH to plan for clinical and hospital surge capacities (hospital beds, human resources, and supplies) with the support of tools and guidelines prepared by PAHO and WHO.
- Provided guidance to the MOH in the development and update of clinical guidelines for the management of patients according to the severity classification in primary care clinics and hospital settings.
- Advised MOH on the expansion of acute care services in hospitals, workflow, and workplace to minimize COVID-19.



## Operational support and logistics

- Delivered laboratory supplies, specifically primers and probes, PPE, and nasopharyngeal swabs to enable Bahamas to ramp up testing for COVID-19, as well as oximeters and ventilators for case management.



## Maintaining essential health services during an outbreak

- Provided PAHO/WHO guidance and guidelines and links to PAHO and WHO webinars and meetings to aid the MOH in selecting, adapting, and maintaining essential health services in the face of the COVID-19 pandemic.
- Supported the rapid assessment and monitoring for continuity of essential health services during the COVID-19 pandemic using a WHO assessment tool.
- Provided on-going support to the national authorities for the procurement and delivery of vaccines through PAHO's revolving funds for maintaining immunization services.



## Preparing for the vaccine rollout

- Participated in planning and development of the National COVID-19 Vaccination Strategy and Plan, using WHO and PAHO guidelines.
- Supported a workshop for the introduction of COVID-19 vaccines, including cold chain management.
- Supported the MOH to strengthen regulatory capacities for the registration and importation of COVID-19 vaccines and pharmaceuticals.
- Provided the MOH and relevant stakeholders with updated information related to the COVID-19 vaccines available through WHO, PAHO, and other scientific sites.

## Barbados



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

- Launched consultations with national health authorities on the development of country strategic preparedness and response plans for COVID-19, according to WHO guidelines.
- Helped national health authorities to access needed technical support/supplies to enable Barbados to effectively respond to the pandemic.
- Coordinated with the United Nations system to develop and implement the Multi-Sectoral Response Plan for the Eastern Caribbean, in coordination with CDEMA, and other partners.
- Continued publication of the PAHO Country Office information bulletin, including measures taken by countries to contain the spread of the virus and highlights on PAHO support to the Member States.
- Maintained the structure of the Country Office Incident Management System Team and adapted the roles of members to the pillars of the WHO SPRP to facilitate implementation and reporting.
- Facilitated coordination with the UNRC system on COVID-19 initiatives.



### Risk communication and community engagement

- Produced posters and booklets on preventive public health measures for COVID-19.
- Produced and disseminated social media cards on coping with stress-related issues during the pandemic.
- Facilitated capacity building in Psychological First Aid (PFA) for community and religious leaders, teachers, and influencers so that they can provide basic mental health and psychosocial support aimed at strengthening individual and community resilience.
- Hosted a virtual youth dialogue titled “COVID-19: Adjusting to the new normal” for 1,400 persons.
- Produced two videos on hand hygiene and mixing of disinfecting solutions for the general public.
- Marketed social media cards, via Facebook, Twitter, and Instagram, on coping with stress.
- Produced a video and a jingle on COVID-19 and discrimination.
- Produced a video highlighting the contributions and issues faced by HCWs in the COVID-19 response.
- Published a case study on Barbados’ leadership and cooperation in containing COVID-19.



### Surveillance, rapid response teams, and case investigation

- Worked with health authorities to ensure that surveillance systems were calibrated with COVID-19 case definitions and introduced data collection tools (e.g., Excel line listing, revised case reporting form).
- Provided orientation on Go.Data, the WHO contact tracing software for data capturing and monitoring the chain of transmission.
- Produced orientation on EpiEstim & CovidSIM mathematical models for short-term forecasting of cases.
- Procured computers to support COVID-19 surveillance and contact tracing.
- Trained medical doctors and other health professionals on WHO guidelines for ICD-10 coding of COVID-19 mortality.
- Provided IT equipment for four polyclinics to enhance surveillance capacities.



### Points of entry, international travel, and transport

- Produced communication materials to raise awareness of risks from COVID-19 at points of entry (POE).
- Regularly reviewed entry protocols for the reopening of borders as they became available, and provided feedback to national authorities.
- Provided necessary equipment, e.g., thermal imagers, and IT tools for data collection, to strengthen infrastructure for case detection at POE.
- Organized a webinar on “Considerations for Resuming non-essential Travel in the Caribbean.”



### National laboratories

- Disseminated guidelines and protocols for COVID-19 testing, procurement, and distribution of sample collection materials.
- Procured and distributed RT-PCR enzymes, extraction kits, and consumables.
- Trained laboratory staff in theoretical aspects of molecular diagnostics.
- Conducted a webinar on scaling up in the Caribbean.
- Established an emergency stock of COVID-19 laboratory materials for distribution to countries and territories in the sub-region.
- Disseminated updates on COVID-19 diagnostics, including recommendations for use of rapid antigen tests (Ag-RDTs) for COVID-19.
- Procured additional laboratory test kits and consumables in support of laboratory strengthening for the diagnosis of SARS-CoV-2.

## Infection prevention and control

- Delivered PPE to protect frontline health workers and priority health facilities that receive and manage COVID-19 cases.
- Assessed isolation units and provided recommendations on how they should be designed and which IPC measures should be considered.
- Established 16 sanitation and hygiene stations in special needs schools.
- Provided PPE - face shields, window face masks, and gloves.
- Provided 12 infrared thermometers, 100 pairs of floor markers, and 5 tables with shelter.
- Provided information and technology equipment: laptops, tablets, and laminating machines.

## Case management

- Conducted a webinar for health personnel on the clinical management of COVID-19, focusing on experiences and lessons learned from across the Region.
- Improved local health system capacity and protected healthcare workers to safely diagnose COVID-19 cases and deliver healthcare services.
- Provided eight vital signs monitors, eight IV infusion pumps, and five oxygen concentrators to augment the capacity for managing COVID-19 cases.
- Trained nursing personnel in critical care management of COVID-19 patients.

## Operational support and logistics

- Ensured the movement of essential medical supplies to the Eastern Caribbean and the British Overseas Territories, through a partnership with the Regional Security Mechanism. The Barbados Defense Force helped with storage and distribution of medical supplies.
- Procured a vehicle for isolation and health facilities to support supply chain management and monitoring.

## Maintaining essential health services during an outbreak

- Worked with the country's immunization program to ensure continuity in vaccinations during the COVID-19 pandemic and to create a forum to exchange experiences and challenges in adjusting the delivery of immunization services.
- Convened a webinar on "Dengue Response during the COVID-19 Pandemic." The webinar targeted policymakers, health experts, medical and public health practitioners.
- Provided training on the use of WHO/UNICEF's annual Joint Reporting Form (JRF) and the new monthly reporting system

for vaccines, allowing national authorities to monitor the impact of the pandemic on the immunization program.

- Participated in the Vaccination Week of the Americas virtual campaign: shared guidance, posters, and key messages to support Barbados to develop this campaign.
- Conducted training with MOH focal points to discuss considerations for children with disabilities, including continued specialized health services for the children and their families.
- Convened a virtual dialogue for young people to discuss what it will take to adjust to this new way of living, and how to cope with pandemic-related isolation in a positive way.
- Hosted a webinar on "Building Back Better NCD Services."
- Collaborated with UNICEF to provide MHPSS support to the affected community.
- Developed a risk communication campaign during COVID-19 for persons living with NCDs.
- Offered online training for health personnel to implement the Self-Management for Chronic Disease Program and provided manuals and tablets to support the program's implementation.
- Shared technical guidance on maternal care during COVID-19 and prepared a summary fact sheet on the increased risk of pregnant women to COVID-19 complications.
- Developed a technical document to provide guidance to various stakeholders on strategies to engage young people in the COVID-19 response.
- Provided technical assistance for the development of a national consultation entitled "A Conversation on Ageing and Elder Affairs: Forming the Narrative". This Consultation was a first step in the process of developing a new national policy and strategic and action plans on ageing and older people in Barbados. This was a joint effort between the MOH and the Ministry of People Empowerment and Elder Affairs (MPEA). PAHO provided support to the development of a National Ageing Policy and Strategic Plan for Barbados.
- Provided support to strengthen the capacity of the vector control program to prevent and control dengue in the midst of the COVID-19 pandemic through the provision of insecticide application and entomological surveillance supplies.
- Produced a video and a jingle on dengue prevention and control in the midst of the COVID-19 pandemic.



## Preparing for the vaccine rollout

- Conducted training sessions on ESAVI and cold chain management.
- Provided technical support for the development of COVID-19 National Vaccination and Deployment Plan and to support vaccine introduction readiness using the VIRAT.
- Provided technical guidance to complete the requirements of the COVAX Facility



## Belize



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

- Provided ongoing technical support to the Ministry of Health and Wellness (MOHW) in country preparedness and response to the COVID-19 pandemic.
- United Nations: Facilitated follow-up meetings on MEDEVAC and the First Line of Defence (FLOD) with United Nations focal points. With United Nations examining physicians, provided updates on emerging COVID-19 epidemiological trends, health system response, and COVID-19 protocols for MEDEVAC and FLOD.
- Participated in meetings with the Ministry of Foreign Affairs (MFA), MOHW, and the National Emergency Management Organization (NEMO) on needs (including health) for persons in shelters and residing in flooded areas post Tropical Storm Eta, Hurricanes Nana and Iota in the context of COVID-19 pandemic. PPE was provided for persons in shelters.
- Facilitated meeting with Belize Defence Force (BDF) to rapidly assess their COVID-19 situation and plan for support in response to the identified needs. Collaborated with the Belize Medical Dental Association (BMDA) and MOHW on the role of the private sector in the COVID-19 response.
- Conducted a virtual presentation for 73 primary school teachers of the Ministry of Education on non-communicable diseases (NCDs) and COVID-19 to highlight the risks of chronic diseases and being infected with COVID-19.



### Risk communication and community engagement

- Updated the MOHW risk communication strategy. Developed key messages on COVID-19 transmission, prevention, stigma and discrimination, alcohol use, breastfeeding, pregnancy, use of masks, homecare, and self-isolation, as well management of hypertension and diabetes.
- Delivered language-specific public service announcements (PSAs) to 85 severely affected and remote communities with indigenous populations and those that lack Internet access and electricity.
- In collaboration with United Nations agencies, designed a COVID-19 Quick Facts and Resources Booklet in English and Spanish for community health workers. Developed video messages for United Nations Day, the launch of the 16 Days of Activism and Human Rights Day.
- In collaboration with the MoFA, conducted radio and TV campaigns on COVID-19 prevention and protective measures

in preparation for the country's national elections.

- Designed language-specific COVID-19 prevention infographics to target the Garifuna and Mayan population, with guidance from the Belize National Garifuna Council and the Belize Maya Leaders Alliance. Produced videos on the work community health workers during COVID-19, the PCR testing process at the Central Medical Laboratory (CML), and PAHO's influenza vaccine drive event.
- Developed a Christmas-themed COVID-19 PSA that aired on national and local radio and television stations during the holiday season.



### Surveillance, rapid response teams, and case investigation

- Provided technical guidance for the integration and timely reporting of COVID-19 into existing SARI surveillance, including the adaptation of the surveillance guidelines.
- Supported capacity building of healthcare workers from all districts by conducting field epidemiology training with the MOH.
- Provided technical guidance to the Statistical Institute of Belize and the MOHW on the modeling of epi projections.
- Facilitated capacity building on timely reporting and consensus on the variables to be reported to PAHO/WHO.



### Points of entry, international travel, and transport

- Provided necessary equipment and materials, e.g., walk-through temperature scanners, digital cameras, liquid dispensers for soap and sanitizers, etc. to enhance COVID-19 surveillance capacity and IPC at the international airport.
- Produced health education materials for use at the airport and key health messages/infographics for returning nationals and tourists.



### National laboratories

- Supported the MOHW to scale up the testing strategies and decentralize COVID-19 antigen testing to health facilities in the regions through the procurement of seven SD Biosensor Rapid Diagnostic Test (RDT) Analyzers; 10,000 antigen tests; and supplies and reagents. PAHO HQ donated 95,000 Ag-RDTs and another two SD Biosensor analyzers.
- Primers, probes, and positive controls were also donated for molecular diagnosis of SARS-CoV-2, while the rapid antigen tests were deployed at district level to ensure timeliness of results.
- Fire extinguishers, smoke detectors, and emergency showers were purchased to enhance the safety of laboratory workers.



## Infection prevention and control

- Facilitated briefing on the regulation, use, and procurement of PPE for health workers in critical care facilities. Capacity building sessions were also held for volunteers and health staff working in quarantine facilities and caregivers in long-stay residential homes for older persons.
- Procured PPE for frontline responders such as the Belize Defence Force, Belize Coast Guard, Customs, Belize Central Prison, and the Ministry of Human Development, Families and Indigenous Peoples' Affairs. Two hundred and thirty (230) non-contact thermometers were delivered to the MOHW.
- PAHO coordinated with national authorities and the IDB to formulate strategies for the management of medical waste in health facilities.



## Case management

- Provided technical guidance on national case management for COVID-19 through the dissemination of updated recommendations for COVID-19 therapies and recommendations from the WHO Solidarity Trials.
- Facilitated continuing medical education (CME) sessions, in collaboration with the MOHW and BMHA on best practices in COVID-19 patient management, including prognoses, mental health and psychosocial support, and the management of complications and sequelae of the disease.
- Supported capacity building for nurses from the Karl Huesner Memorial Hospital (KHHM) and regional hospitals on critical care nursing, in partnership with the University of the West Indies School of Nursing in Trinidad and Tobago.
- Donated medical equipment ventilators, patient monitors, mobile x-ray machine, and accessories to the KHHM to improve their COVID-19 critical care unit. Two hundred pulse oximeters were handed over to MOHW.
- Trained national counterparts on the PAHO tool on the estimation and management of COVID-19 to estimate needs for PPE, human resources, ICU and critical care beds, and supplies.
- Disseminated information on strengthening regulatory capacity and supply chain management.



## Operational support and logistics

- Coordinated with United Nations Resident Coordinator Office, UNHCR, UNFPA, and ILO to hand over equipment and supplies funded by the United Nations Multi-Partners Trust Fund for COVID-19 response.
- Facilitated the handover of equipment, materials, and supplies to MOH, in collaboration with donor representatives.
- Continued the follow up of equipment and supplies procurement through the COVID-19 Supply Portal.



## Maintaining essential health services during an outbreak

- Provided guidance on the reorganization of health services to meet the changing demands in essential services during the pandemic, including the maintenance of immunization services.
- Facilitated capacity building in MHPSS, on HIV self-testing, chronic non-communicable diseases, disabilities and rehabilitation, blood regulation, public health ethics, information systems and digital health, telemedicine and virtual care, malaria elimination, dengue prevention and treatment, maternal and child health surveillance, youth and adolescent health, and caring for older persons.
- Supported the MOHW's Community Health Platform providing community health worker (CHW) kits with basic health monitoring equipment and supplies, developed CHW training curriculum on NCDs, and donated laptops and projectors to facilitate training.



## Preparing for the vaccine rollout

- Participated in planning meetings for the national deployment of COVID-19 vaccines.
- Reviewed plans and other documents including the VIRAT, cold chain equipment, regulatory framework, indemnification and liability, risk communication, and demand generation.
- Provided regular updates on progress on COVID-19 candidate vaccines and access through the COVAX Facility.
- Provided capacity building on analysis of cold chain capacity, costing using the CVIC Tool, post-marketing surveillance, crisis communication, etc.



## Bolivia

### (Plurinational State of)



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

- Supported national authorities to establish the Strategic Coordination Group, composed of the presidency and ministries of health, defense, development planning and others; the national EOC; the Office of the United Nations Resident Coordinator, the World Bank, and the IDB.
- Supported national authorities to develop and implement the National COVID-19 Response Strategy.
- Disseminated the National COVID-19 Response Strategy, seeking widespread socialization and consensus with national and subnational authorities.
- Provided technical support to the Ministry of Health (MOH) to develop the Post-Lockdown Containment, Mitigation and Recovery Plan in response to COVID-19 (through December 2020), using the active community surveillance strategy.
- Prepared, published and disseminated 1,000 copies of the strategy through a national launch in five departments.
- Launched a project to implement a risk training and communication strategy for COVID-19 in Guaraní indigenous populations, through a partnership with the School of Health Tekove Katu; similar actions are under way for the Yuki people.
- Led the Sectoral Health Group and generated sectoral and cross-sectoral coordination processes within the framework of the Humanitarian Country Team.
- Created an Incident Command to coordinate the emergency response to COVID-19.
- Provided technical guidance and support to formulate the country's 2021 COVID-19 response plan.



#### Risk communication and community engagement

- Supported the MOH and the Vice-Ministry of Communication to develop and implement the risk communication strategy for COVID-19.
- Supported the MOH and Departmental Health Services (SEDES) to develop risk communication materials to reach the general population and adapt the materials addressed to indigenous groups, Afro-Bolivians, and populations living in the Amazon region, Chaco, and the highlands.
- Disseminated messages through social networks designed to address discrimination against COVID-19, generate respect for health workers, promote self-care and social distancing measures.
- Forged strategic alliances with the United Nations Communication Group in Bolivia (Plurinational State of), the Country Humanitarian Team, and prestigious media groups (at the state, private and community levels).

- In coordination with the SEDES of Santa Cruz, Beni, and Oruro, conducted a survey on risk perceptions to guide community risk activities. Executed a risk communication plan based on that study in Beni.
- Designed a survey on citizens' attitudes toward the COVID-19 vaccine and a digital study of the anti-vaccine movement.



#### Surveillance, rapid response teams, and case investigation

- Developed a methodology and tools for information management, case definition, case detection protocols, quarantine, and home isolation.
- Developed a community surveillance strategy to mobilize health brigades and rapid response teams in coordination with other actors to detect and isolate cases in timely manner.
- Helped adapt guidelines for handling and disposition of bodies of COVID-19 victims, adapting the guidelines to agricultural populations, indigenous peoples (through the COVID-19 Guide for Indigenous Peoples), Afro-Bolivians, and other groups.
- Guided Bolivia (Plurinational State of) in the use of the EpiEstim tool to analyze and visualize the virus' effective reproduction rate and to formulate projections on how it will spread in the light of the public health measures applied and the national health system (using the CovidSIM tool).
- Collaborated with the National Liaison Center in the periodic reporting of information on COVID-19, in line with the IHR.
- Set up the Regulatory Center for Medical Emergencies (CRUEM) in Oruro, strengthened the epidemiological information system, and monitored health services needs (beds, oxygen, ambulances, etc.).



#### Points of entry, international travel, and transport

- Coordinated with the National Emergency Operations Center and the Environmental Health, Emergency and Disaster Risk Management Unit of the MOH to mobilize rapid response teams for COVID-19 surveillance at air and land entry points, in order to respond to situations created by 20,000 repatriated Bolivians.
- Provided training on biosecurity protocols for airport, customs, and migration personnel.
- Brigades in the Department of Oruro received support for surveillance of critical border points at the beginning of the pandemic.
- Fostered coordination among national authorities: epidemiology; civil aviation; airport authorities; and SEDES to implement safety measures and protocols for air transport, both for ground and in-flight services.
- Supported SEDES in decision-making for border control and closure related to entry points (both land borders and those formed by rivers) under the IHR.



## National laboratories

- Provided technical support for the installation of new open molecular biology laboratories and laboratories with GeneXpert platforms in different departments of Bolivia (Plurinational State of). Trained the country's laboratory staff on molecular diagnostic analysis using real-time PCR and GeneXpert.
- Provided 12,000 laboratory kits for PCR and 10,000 PPE sets, which accounted for 50% of the total PCR tests carried out in the laboratories 2020.
- Helped health networks in the Department of Oruro to organize procedures for sampling, transfer, processing, reading and delivery of PCR test results.
- Trained the laboratory staff at the National Center for Tropical Diseases (CENETROP) to interpret the results of PCR COVID-19.
- Through social networks, provided training on the use and interpretation of virological, serological and antigen-based tests, in coordination with the National Institute of Health Laboratories (INLASA).
- Provided support for antigen tests, in connection with the promotion, training and donation of 60,000 immunochromatographic tests.
- Established a SARS-CoV-2 network of molecular biology laboratories with external quality controls (CENETROP).



## Infection prevention and control

- Trained health personnel on biosecurity protocols related to the proper use of PPE, sample collection, and patient isolation.
- Broadly disseminated guidelines and manuals on hygiene, water and waste management to staff from the MOH, HSDS, and health and water, sanitation and hygiene conglomerates.
- Supported the MOH to develop a PPE supply plan.
- In Santa Cruz, Cobija, and Oruro, supported the installation of isolation and recovery centers for patients with mild cases of COVID-19, in terms of logistics, operations, and training on biosecurity for health and service personnel.
- Carried out a training plan to improve the response skills of health workers (10 virtual courses; 26 courses (mixed face-to face and virtual); and 1,400 participants).
- Set up of 11 isolation centers: adequate indoor environmental conditions and biosecurity protocols. Activities were made possible by interagency collaboration: WFP (food supply); UNICEF (PPE); and the leadership of the MOH. Systematized the experience with setting isolation centers for mild cases of COVID-19 in 23 centers in Bolivia (Plurinational State of).



## Case management

- Supported national health authorities to reorganize and strengthen existing hospital services to manage COVID-19 cases, including critical cases.
- Trained health personnel hired by the COVID-19 health networks and hospitals.
- Applied the COVID-19 Hospital Readiness Checklist (organization, leadership, differentiated triage, isolation, etc.) at 42 reference hospitals in nine departments, including social security and private hospitals.
- Disseminated guidelines and protocols for the management of pre-hospital care cases.
- Supported the Scientific Commission of the MOH to design and update clinical protocols and guidelines for the management of COVID-19 patients with mild, moderate and severe or critical tables.
- Supported the management of the Solidarity clinical trial through an agreement between the MOH and WHO. Provided training on the protocol and data collection tool for 15 hospitals that will conduct the study.
- The Oruro department reorganized the health services networks, readying health facilities and reassigning 50% the primary care health workforce to manage suspected and positive cases of COVID-19 (triage, isolation, referral, telemedicine, brigades).
- Support provided to Hospitales de La Mujer, de Clínicas, Boliviano Holandés, and Challapata as they are converted to treat COVID-19 patients.
- Supported the Ministry of Health in the design of COVID-19 management guidelines for Bolivian agricultural populations, indigenous peoples and Afro-Bolivians.
- Developed a 2021 COVID-19 Training Plan for health personnel hired by the corresponding health networks and hospitals (1,700 participants) using the PAHO Virtual Campus for Public Health.
- Provided technical support to strengthen 17 health network offices in order to program and supervise the deployment of the Active Community Surveillance Brigades.
- Applied the PAHO Essential Conditions Assessment Tool (VCE) in primary care networks and facilities in Oruro and La Paz. Follow-up to the final Improvement and evaluation plans.
- With support from SNIS, developed a digital platform for monitoring occupancy rates and availability of hospital beds.



## Operational support and logistics

- Supported the MOH to estimate gaps in the supply of services to manage COVID-19 patients and program the distribution of equipment and supplies. The Center for Health Provisions and Supplies (CEASS) and the Health and Medical Equipment Infrastructure Agency (AISEM) are currently implementing this plan.
- Supported the country's Agency for Medicines and Health Technologies to conduct an institutional evaluation; make a proposal to counter rising prices due to the pandemic; conduct training on pharmacovigilance and clinical trials; and to manufacture of community masks.
- Organized health networks in Oruro to prepare and distribute kits for home management of mild patients with COVID-19.
- Supported the country's Office for Drugs and Supplies (CEASS) in the development of control systems for the logistics of medicines and supplies as well as the distribution of PPE donated by PAHO/WHO.
- Supported the MOH to recruit approximately 140 technicians in order to implement the national pandemic plan.
- Obtained, through PAHO's Strategic Fund, 150,000 rapid antigen test kits.



## Maintaining essential services during an outbreak

- Supported the MOH to strengthen the first level of care, by using community brigades to monitor isolation centers, perform contact tracing, detect cases and do early referral of cases.
- Supported the MOH to develop a document on adaptation of health services for a consolidated response to COVID-19 and to ensure the continuity of essential health services.
- Supported the conversion of COVID-19 hospitals to maintain essential services or reassign them to other facilities.
- Implemented the health network adaptation plan for a consolidated COVID-19 response, maintaining and monitoring of essential health services.

- Through the Health Action Group, produced a document on strengthening essential health services for vulnerable populations in the context of the COVID-19 pandemic, aimed at authorities and technical working groups.
- Supported the MOH to calculate the percentage of population at high risk of COVID-19 due to underlying health conditions.
- Systematized the indirect effects of COVID-19 on essential health services for women, pregnant women, newborns, children, adolescents, and older adults.
- Provided training on an integrated care model for victims of sexual violence in the context of COVID-19; donated to reference hospitals 1,000 evidence boxes care for victims of sexual violence.
- Supported the organization of a National Comprehensive and Community Mental Health Care Network (RENASMIC); implemented the mhGAP (Mental Health Global Action Plan) Guide for mental, neurological and substance use disorders; supported a telephone survey on the impact of COVID-19 on mental health and noncommunicable diseases (NCDs); prepared stories about the impact of COVID-19 on community mental health.
- Assisted with donations of 31,500 doses of insulin and 10,500 doses of WHO glucagon to expand diabetes care as part of the global pandemic response.



## Preparing for the vaccine rollout

- Developed the National Preliminary COVID-19 Vaccination Plan.
- Supported a communication strategy for the introduction of the COVID-19 vaccine and a social media communication plan.
- Supported the MOH in a self-assessment of the Plan, using the VIRAT tool, a requirement for accessing vaccines.
- Helped update the country's Surveillance Guide on Events Supposedly Attributable to Vaccination or Immunization (ESAVI).
- Supported the MOH as it ratified its participation in the COVAX Facility.



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

- Supported coordination of the emergency response to COVID-19 among municipal, state and federal levels, within the framework of the country's Unified Health System (SUS).
- Contributed to Brazil's emergency plans and protocols to improve national readiness.
- Supported states to define and monitor the implementation of non-pharmacological measures. One hundred and seven WHO and PAHO/WHO COVID-19 publications and tools were translated into Portuguese.
- Coordinated pandemic response efforts with other United Nations agencies and international organizations to support vulnerable populations such as indigenous, coastal, and isolated communities, especially in the northern region of the country.
- Worked with the Special Secretariat for Indigenous Health to prepare a weekly Epidemiological Bulletin focused on the country's indigenous populations.
- Established an agreement with the state of Amazonas to strengthen COVID-19 preparedness and response.
- Liaised with the MOH to use data from surveys conducted in the prison system to develop a tool for the National Council of Justice.
- Supported coordination among Japan, Spain and the MOH to hold a webinar to exchange experiences in combating the COVID-19 pandemic.
- Helped create the SUS Strategic Information Center for State Management (CIEGES) to develop information dashboards and make strategic information available to improve decision-making, planning, budgeting, and financial decisions.
- Supported the development of state-level dashboards for managing labor and health education. CIEGES provided state health authorities with data and indicators on the size and composition of the SUS workforce, as well a breakdown on numbers and costs related to SUS staff that gave health authorities a dimensional overview and aided in the distribution of human resources for health.



### Risk communication and community engagement

- Carried out a critical review of the states' and municipal-level response in the area of communications.
- Collaborated on developing best practices and targeted communications plans, such as for contact tracing (in Paraná and Mato Grosso do Sul); the implementation of disease

prevention measures (in Rio Grande do Norte); to support the new municipal administration (Rio de Janeiro), and for the vaccination communication plan (Amazonas state).

- Produced scientifically-based communication materials; disseminated information to different target audience via social media and other platforms; worked with the media to provide the population with accurate information; and reviewed and dispelled false information and unfounded rumors related to COVID-19, using WHO'S Epidemic Intelligence from Open Sources (EIOS).



### Surveillance, rapid response teams, and case investigation

- Strengthened the surveillance and response capacity of the MOH Strategic Health Surveillance Information Center (CIEVS) by transferring dashboards that allowed them to monitor and analyze indicators and make projections that support government decision-making.
- Collaborated with various states to develop their own dashboards and databases for the collection of epidemiological information.
- In conjunction with the MOH and Brazilian institutions, planned a national seroepidemiological study to determine the prevalence of SARS-CoV-2 infection in Brazil; supported the design of a platform to collect data from the study. Helped develop a seroprevalence research project for the state Pernambuco.
- Contracted 274 health professionals to support efforts in 27 federal states to increase surveillance and laboratory staff and strengthen surveillance capacities to address emerging and re-emerging pathogens. In Manaus and the state of Amazonas the workforce was expanded by 124 health professionals. In the state of Roraima, 18 analysts, biochemists and laboratory technicians were contracted.
- Continued to train staff from the MOH countrywide on the use of Go.Data for contact tracing. Guided new health managers in the municipalities of Rio de Janeiro and Manaus, who took on pandemic response responsibilities, on information management, data analysis, clinical management, and laboratory diagnostic flow.
- Supported the ministry of health and other national actors to design of four epidemiological studies on the P1 variant of SARS-CoV-2 in order to determine its transmission rate, how it affects reinfection, and clinical presentation associated with this variant.
- In the municipality of Rio de Janeiro and the states of Pará and Santa Catarina, supported setting up the Emergency Operations Center to conduct epidemiological analysis and the automate their COVID-19 epidemiological bulletin.

- Supported health authorities in Amazonas, Amapá, Roraima and Rondonia to strengthen local capacity in surveillance, health care, crisis management, analysis of the health situation and forecasting. A course was given to train health technicians in Boa Vista (Roraima), (Goiás) and Marabá (Pará) on analyzing health situations.
- Supported the genomic surveillance network to develop strategies and strengthen human resources for the identification of circulating strains, especially variants of concern (VOCs). Provided daily updates to the MOH with data on the genomic surveillance of strains circulating in Brazil.



### Points of entry, international travel, and transport

- Collaborated with the MOH to develop, adapt, and implement guidelines and protocols on surveillance at borders.
- Supported the Oswaldo Cruz Foundation and the MOH to reorganize the education program on health surveillance to address needs at the border.
- Supported the MOH to strengthen information management and health surveillance in selected border municipalities.



### National laboratories

- Supported the states of Roraima, Pará, Rondonia, Amapá, and Maranhão to improve their capacity to diagnose SARS-CoV-2 infection by donating rapid antigen-based tests.
- Supported the Central Public Health Laboratory of Amazonas (LACEN) to create automated routines to quickly analyze the situation and improve the recording results in the information system; expanded staff to allow for 24/7 operations.
- Provided rapid antigen-based tests for COVID-19 diagnosis and oximeters for silent hypoxemia monitoring in patients to health authorities in Amazonia.
- Developed technical guidance and video training for health professionals in the correct use of the rapid antigen-based test.



### Infection prevention and control

- Together with the MOH, trained more than 38,000 health professionals in IPC



### Case management

- Supported the state of Amazonas to develop a primary health care treatment plan for patients with mild and initial COVID-19 symptoms; provided recommendations to assess oxygen consumption and donated concentrators.
- Due to the significant increase in cases statewide, collaborated with health authorities in Amazonas state to

reorganize the flow of services in health facilities treating COVID-19 patients and to develop a plan to free up bed space. PAHO also helped to develop contingency plans for the rational use of neuromuscular blockers and other treatments for COVID-19 patients.

- Worked with the states of Amapá and Roraima to diagnose needs among COVID-19 patients and develop contingency plans to avoid shortages of oxygen and other supplies.
- Collaborated with the MOH to train more than 4,600 health professionals in the clinical management of COVID-19.
- Sent rapid antigen diagnostic kits to several state health departments to take pressure off of hospitals and to manage cases in remote regions and among vulnerable populations.
- Coordinated with 53 hospitals in Brazil to participate in WHO's project Global Clinical Data Platform COVID-19, which collects anonymous clinical data related to suspected or confirmed COVID-19 hospitalizations.



### Operational support and logistics

- Coordinated the purchase of rapid diagnostic tests and medicines and supplies for critical patient care.
- Facilitated donations of PPE for health facilities in low-income communities.
- Helped CONASS, Brazil's national council of health secretariats, to acquire equipment to set up situation rooms in the 27 federal Strategic Information Centers and a situation room in the Central Office Central.



### Maintaining essential health services during an outbreak

- Systematized primary health care best practices, which provided important resources for national SUS managers.
- Developed training programs for health professionals in PPE, clinical management, and mental health; in coordination with the network of university hospitals, used simulation exercises to train healthcare workers prior to deployment to Amazonas.
- Together with WHO and the Gates Foundation, worked on a project to identify the indirect effects of COVID-19 on essential health services for pregnant women, newborns, adolescents and older adults in the municipalities of São Luís (Maranhão), Pelotas (Rio Grande do Sul) and Niterói (Rio de Janeiro).
- Developed technical guidance for the management of patients under 10 years of age with multisystem inflammatory syndrome in children (MIS-C).
- Participated in the production of guidance videos for adolescents and young people with health questions regarding the pandemic.

- Collaborated in producing recommendations for health professionals for treatment of COVID-19 in pregnant women and those who have recently given birth. Produced 16 video classes related to the publication
- Supported the WHO-led study, "Definition and categorization of the moment of timing of mother-to-child transmission of SARS-CoV-2," which was carried out by the University of Campinas (UNICAMP). Contributed to the planning of the second phase of the study.
- Helped to convene a national call for best practices under the banner "Strong Primary Health Care in the fight against the pandemic" so that the best practices of basic health teams could receive widespread recognition. Over 1,600 experiences were disseminated and the broadcasts reached more than 60,000 people, professionals and health sector managers. More information is available [here](#).
- Supported the development of a specific care line for COVID-19. An infographic supports managers, workers and health teams in responding to the needs of patients during the pandemic. Check [here](#) for more information.
- Supported the conformation of a national technical group to discuss issues related to the purchase of COVID-19 vaccination syringes through PAHO's Revolving Fund (the MOH purchased 190 million syringes).
- In conjunction with PAHO's Revolving Fund, the Organization participated in the MOH negotiations for the purchase of COVID-19 vaccines through the COVAX Facility.
- Helped the national immunization program in the MOH to implement the COVID-19 Vaccine Introduction Readiness Assessment Tool (VIRAT).
- Supported in the recruitment of human resources in 27 states to provide services, monitor vaccine-preventable events, and support national vaccination programs and laboratory surveillance.
- Supported the MOH to develop protocols for monitoring adverse events of special interest related to the COVID-19.
- Supported the Central Crisis Management Committee in Amazonas to:
  - Implement the immunization plan, with technical information on logistics, procuring supplies, and research on post-vaccine adverse events (EAPV).
  - Implement a computer platform to record vaccination data with individual identification and EAPV registration.
  - Create a panel to monitor panel vaccine distribution.



### Preparing for the vaccine rollout

- Worked with the MOH to design and implement a national COVID-19 vaccination plan. Supported two States to develop state-level immunization plans.
- Supported the MOH to prepare the national and state vaccination plans for COVID-19.



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

- Collaborated with national authorities to develop and implement Chile's action plan for COVID-19, adapting PAHO and WHO protocols and methodologies to the country context.
- Disseminated PAHO/WHO technical guidelines and updates with national authorities, organizing discussions to exchange views and recommendations on components of the response, such as the epidemic intelligence and the work of the sub-committee, chaired by the Ministry of Science (click [here](#) to read more); adjustments to public health measures and the availability of data for monitoring; the integration with sentinel influenza surveillance, and recommended use of antigen-based diagnostic tests.
- Facilitated interagency discussions (UNESCO, UNICEF, ILO, United Nations Resident Coordinator) on the reopening of schools and participated in UNSC Working Groups to prepare proposals for ONE COVID-19 Response and Recovery Multi-Partner Trust Fund (MPTF) positioning the health issue in the Socioeconomic Response Plan to the Pandemic.
- Participated in the Inter-Agency Committee on Human Rights, advocating for the health rights of the most vulnerable.
- Continued to participate in ProSUR thematic discussions on joint procurement and epidemiological data.
- Participated with representatives from the MOH and of Indigenous and Afro-descendant Peoples in a subregional technical consultation and a high-level meeting on the impact of COVID-19. Followed up on the availability of information on the impact of COVID-19 indigenous peoples and identify areas of cooperation.
- Finalized the United Nations Communications and Change of Conduct Plan, which provides guidance for agencies, funds and programs.
- Contributed to the preparation of the 2021 COVID-19 Action Plan and validation of health sector activities of the Venezuelan Regional Platform for Migrants and Refugees.
- Held a technical meeting with Chilean Institute of Public Health to discuss Chile's participation in the Solidarity Clinical Trial, maternal health issues, and the use of antigen-based diagnostics.
- Participated in the virtual consultation on rare diseases and COVID-19, organized by APEC.

- Engaged the community and health professionals:
  - From Raúl Silva Henríquez University on PAHO/WHO's role in COVID-19.
  - With the University of Magellan on the epidemiology of the pandemic in Chile.
  - Held the 4th Conversation, Dialogues on Primary Health Care: Care of Health Teams in Pandemic Times. More information is available [here](#).
  - Presented at the International Social Security Forum, "Professional Diseases (focusing on work-related diseases) during the pandemic."
  - PAHO experts in mental health and gender participated in the Virtual Congress of Public Health and Epidemiology "Action and Reflection during COVID-19."



### Risk communication and community engagement

- Participated, together with the Minister of Sciences, in an international press conference on the COVID-19 data in Chile, September 2020. Click [here](#) to read more (in Spanish)
- Met with the MOH communications team to discuss risk communications challenges and strategies. The Health Squad strategy was presented and support was given to training squad members.
- Developed virtual courses to train instructors in COVID-19 prevention in open markets, in coordination with the University of Chile and the University of Valparaíso.
- Provided technical advice to working groups in the United Nations system on preparing and communicating risks to United Nations staff. Conducted a workshop on COVID-19 prevention in fieldwork for UNSC staff.
- In the context of COVID-19, developed a campaign for LGBTQ+ people, with the participation of civil society organizations and for the international HIV/AIDS Day. Read more [here](#).



### Surveillance, rapid response teams, and case investigation

- Participated in the COVID-19 webinar on influenza and pollution, with a focus on respiratory disease surveillance and the use of sentinel surveillance for COVID-19.
- Collaborated with the Global Outbreak Alert and Response Network (GOARN) to train country counterparts in adopting Go.Data for contact tracing.
- Supported the definition of criteria for COVID-19 surveillance and the corresponding reporting of cases and deaths through global and regional data platforms.
- Provided recommendations to strengthen the surveillance system and provided support to analyze and visualize the

effective reproduction rate of the virus (using the EpiEstim tool) and to make projections on how it will spread in each country, taking into account the public health measures applied and its health system (using the CovidSIM tool).  
Monitored information regarding the circulation of variants of the SARS-CoV-2 virus. Alerted national authorities about variants of interest and provided recommendations on strengthening genomic surveillance.

- The Universidad de la Frontera was identified as a research center to participate in the study of how severe acute respiratory infections by SARS-CoV-2 affects pregnancy outcomes. The university received a grant from WHO to adapt the generic protocol for implementation in Chile.
- Facilitated the meeting between PAHO and MOH experts on the International Classification of Diseases, to share information and clarify doubts about the classification of deaths associated with COVID-19.



### Points of entry, international travel, and transport

- PAHO participated in an intersectoral roundtable on the International Health Regulations (IHR) and provided global recommendations and followed up on the measures taken at points of entry into Chile. PAHO/WHO provided recommendations on reactivation of non-essential international travel.
- Met with national health and aeronautical authorities to discuss the resumption of non-essential domestic and international flights and provide PAHO/WHO recommendations.
- Participated in monthly meetings of the IHR team, together with other sectors of interest (armed forces, police, foreign relations, etc.) to monitor progress and recommendations.



### National laboratories

- Trained the national reference laboratory team to adopt the recommended technique for diagnosing COVID-19 using RT-PCR.
- Provided supplies to strengthen the analysis capacity of the national reference laboratory.
- Supported Chile's participation in the working group of national regulatory authorities related to the Solidarity clinical trial for vaccines.
- Recommended strengthening genomic and COVID-19 surveillance in the human-animal interface and exchange verbal communications with PSI and Ministry of Health. Met with Chile's agricultural and livestock service (SAG) following the WHO report on COVID-19 in mink.



### Infection prevention and control

- Held technical meetings with the MOH and PAHO/WHO focal points to make recommendations on the use of PPE, transmission mechanisms for SARS-CoV-2, and community protection measures.
- Trained United Nations staff in Chile on IPC in everyday situations.



### Case management

- Provided therapeutic supplies; technical support to the MOH to improve case management; and access to PAHO/WHO clinical management guidelines, online training resources and virtual meetings.
- Conducted the Second Virtual Dialogue on primary health care: Strategies for continuity of care in people with chronic diseases, in the context of the COVID-19 pandemic. Learn more [here](#).



### Operational support and logistics

- Supported purchases of laboratory supplies through PAHO's Strategic Fund and local purchases using emergency funds.



### Maintaining essential health services during an outbreak

- Organized inter-country exchanges of experiences on the means to safely resume elective surgeries.
- Collaborated with the University of Chile to develop a complete triage and distance care model for patients with and without COVID-19 at the primary health care (PHC) level.
- Used public communications, dialogues with academic institutions, and conferences with health service managers to advocate for the importance of maintaining essential health services, with an emphasis on the first level of care.
- Delivered equipment to two PHC facilities as part of the Tele-triage Project in PHC to optimize services that have been impacted by the pandemic. Eventually this new model may be considered for primary health care services. Learn more [here](#). PAHO also organized the seminar on the telemedicine regulatory framework.
- Through a program to reduce morbidity associated with COVID-19, health teams were trained in smoking cessation strategies at the primary care level, which they used in two vulnerable communes. Learn more [here](#).
- Conducted the Third Conversational Dialogue of the PHC Community of Practice that looked at information systems and digital health during COVID-19 pandemic.

- Held a meeting with national health authorities and universities and societies to take first steps on a cervical cancer program during the COVID 19 pandemic.



### Preparing for the vaccine rollout

- Coordinated a meeting between the MOH immunizations and ICT teams and PAHO/WHO, as part of the review process of an ESAVI surveillance information systems survey and the development of the regional plan for the safety of COVID-19 vaccines.
- Promoted the country's participation in the WHO Solidarity clinical trial for COVID-19 treatments.
- Promoted Chile's accession to the COVAX Facility.



## Colombia



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

- Collaborated with the Ministry of Health and Social Protection (MOH) to formulate and adapt PAHO guidelines to the Colombian context and build national capacities to respond to the COVID-19 pandemic.
- Strengthened the MOH Health Action Group and coordinated activities with partners in the response to COVID-19.
- Developed an intersectoral response plan for COVID-19.
- Facilitated a bilateral coordination meeting between health authorities from Colombia and Venezuela (Bolivarian Republic of) to formulate strategies to protect the health of the population in the border area.
- Carried out a technical mission with the MOH to the State of Amazonas to help local authorities develop a contingency plan. PAHO mobilized health professionals and delivered medicines, PPE, three respirators, and an oxygen concentrator to the local hospital.
- As part of the inter-institutional project "Health for Peace" (PAHO, IOM, and UNFPA), carried out interventions focused on COVID-19 in 171 municipalities, which included the delivery of PPE and equipment for emergency rooms in primary and secondary level facilities and the strengthening of COVID-19 surveillance.
- In coordination with the United Nations system, developed an action plan to strengthen the response to COVID-19 in the department of Amazonas, which borders Brazil and Peru, to focus on indigenous communities.
- Formulated health interventions for migrant populations in Colombia.
- Provided technical assistance to the Presidency, the MOH, and other sectors in the follow-up and analysis of cases, preventive measures, and the response to COVID-19.



### Risk communication and community engagement

- Continued transmitting situation reports to national authorities, United Nations agencies, the Health Action Group, embassies, territorial entities, and humanitarian partners.

- Collaborated with the MOH and other stakeholders to prepare content to advise the population on how to prevent infection, maintain a healthy lifestyle, and protect mental health. This content was broadcast on the United Nations weekly radio program, at the International Book Fair in Bogota, and through other media.
- Provided training on risk communication to 70 health workers in the media and hospitals, as well as indigenous leaders from the department of Guajira. The materials were adapted to the Wayunaiki language.
- Disseminated key messages on social networks, at risk communication workshops, through radio programs, and other United Nations platforms, aimed at health personnel and the community in general.
- Forged alliances with the manufacturing sector to raise awareness and prevent risks.
- Carried out 10 cyber-seminars on key topics related to COVID-19 for humanitarian partners and territorial entities that are part of the Health Sector Group.



### Surveillance, rapid response teams, and case investigation

- Trained health professionals on how to use Go.Data for contact tracing and how to analyze and visualize the effective reproduction rate of the virus (using the EpiEstim tool) and make projections about how it could spread, taking into account the public health measures applied and the health system (using the CovidSIM tool).
- Purchased supplies to equip 16 community centers in La Guajira.
- Hired a professional in the department of Chocó to strengthen public health surveillance, manage information, and respond to important public health events, with a focus on responding to COVID-19.



### National laboratories

- Provided technical support to strengthen laboratory diagnostics for COVID-19.
- Delivered 100,000 PCR tests for high-risk groups and priority areas.
- Provided equipment and supplies to five prioritized public health laboratories and supplies for PCR testing to the department of Amazonas.



## Infection prevention and control

- Delivered PPE (440,000 gloves, 4,000 surgical and N95 masks, and other supplies) to the Colombian Air Force for use in transporting severe cases from remote areas to designated specialized health centers.
- Delivered PPE to the departments of Vichada, Amazonas, La Guajira and Norte de Santander, as well as to a hospital in Cundinamarca and the San Francisco de Asís de Quibdó hospital. Distributed PPE to migrants traveling on foot and residents of temporary shelters in Ipiales.
- Trained health professionals to use the tool to calculate needs for PPE and other supplies. In Amazonas, provided supplies and transport required for Ag-RDT and PCR samples.
- Provided 250 care kits for the indigenous population of the department of Vaupés.



## Case management

- Trained workers from the MOH in the reorganization and expansion of health services, primary care, the management of emergency medical teams, and the establishment of alternative medical care sites.
- Facilitated the donation of 65 oxygen concentrators and other supplies offered by donors.
- Trained 70 health workers from hospitals in the Atlantic department on the use of supply management tools for medicines, goods, supplies and other essential elements.
- Provided the Colombian Air Force with a transport capsule and accessories to reduce the risk of contagion from patients with COVID-19.
- Purchased an oxygen generating plant for the E.S.E. Nazareth Hospital in the Alta Guajira region.
- Equipped four prioritized health facilities in Norte de Santander and Arauca with supplies and equipment for triage and for hospital expansion.
- Provided technical support to the reference hospital in the department of Santander to expand hospital services and improve triage.



## Operational support and logistical

- Supported the MOH with the shipment of PCR supplies to Colombian territories.
- Supported the transportation of the rapid response team of the National Institute of Health to the department of La Guajira.



## Maintaining essential health services during an outbreak

- Collaborated with national authorities to maintain national vaccination services by hiring 100 vaccination workers and delivering vaccination kits and PPE to 12 departments, three districts, and 41 municipalities.
- Delivered medicines, equipment, anthropometric kits, therapeutic food, and antiparasitic drugs to prioritized health institutions to provide care for groups of migrants. These items will be used primarily in emergency rooms and for maternal and perinatal care.
- Supported the development of a Comprehensive Territorial Health Care Model based on the work coordinated by community health managers in the department of La Guajira.
- Adapted obstetric care services to ensure compliance with basic quality care standards in emergency rooms, prenatal care, delivery care and emergency obstetric care, and adapted tools to facilitate consultations from home using telemedicine.



## Preparing for the vaccine rollout

- Supported the country's application to the COVAX Facility to gain access to COVID-19 vaccines.

## Costa Rica



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

- Coordinated the national response to COVID-19 with the National Commission for Risk Prevention and Emergency Response (CNE), integrating the country office into the different intersectoral roundtables.
- Activated the United Nations Health Cluster, at the request of the MOH. Supported the United Nations Inter-Agency Emergency Response Group (UNETE) as technical secretariat, with to coordinate the response of the United Nations System and other humanitarian actors to the pandemic.
- Prepared the COVID-19 Health Response Plan for vulnerable populations in cross-border areas, with the participation of IOM, UNHCR and the Resident Coordinator's office (RCO). Implemented protocols at border points (strategy implemented in the context of the pandemic with an approach that considers migrants).
- Participated in the health services roundtable with the International Center for Pure and Applied Mathematics (CIMPA) of the University of Costa Rica; the Social Security Agency; and the MOH during which the behavior of the pandemic was analyzed and projections regarding its impact are made to enable decision-making and adjustments to health measures and regarding the national economic recovery.
- Supported, together with WHO, the presidential initiative on the COVID-19 Rights Repository, a platform that allows for the sharing of data, knowledge, and intellectual property and facilitates equitable access to health products.
- Coordinated actions with the Costa Rican Coffee Institute (ICAFE) for a comprehensive health approach for indigenous and migrant children and families who participate in the coffee harvest, in the context of COVID-19.
- Identified priority technical cooperation actions with the Joint Institute for Social Assistance (IMAS), and made progress in diagnosing capacities and vulnerabilities in WASH at the national level.
- Advanced in the preparation of the National Plan for Pharmaceutical Services, based on primary health care in the context of COVID-19, in conjunction with the ministry of health.
- Coordinated a training strategy to strengthen care centers for the return of face-to-face activities in the context of the pandemic with the Technical Directorate of the National Education and Nutrition Centers and Comprehensive Care Child Centers (CEN CINAI).



### Risk communication and community engagement

- Collaborated on more than 30 campaigns through various communication channels. PAHO worked mainly with the MOH, CCSS, CNE, the Presidency of the Republic, the Women's Institute (INAMU), IMAS, the Ministry of Labor and Social Security (MTSS), the Ministry of Public Safety (MSP), the Institute on Alcoholism and Drug Dependence (IAFA), and the Costa Rican WEM Institute of Masculinity, Partners, and Sexuality.
- Participated with the United Nations System (IOM, UNICEF, UNFPA, UNDP, FAO, and RCO) in campaigns to combat COVID-19, geared toward vulnerable populations.
- Provided support to the Information System for Emergency Prevention and Response (SIPAE) in its role as technical advisory committee for the management of public information and risk communication.
- Helped strengthen communication capacities with partners in the IMAS "Bridge to Development" strategy, including the Ministry of Public Education and of Culture and Youth, in the design of health communication materials.
- Supported the organization of and participation in high-level events such as: "Mental Health in the COVID-19 pandemic: A priority for women's human rights;" the international symposium "Transparency and access to information in times of pandemic," organized by the Legislative Assembly of Costa Rica; and the Conference on Risk Management (University of Costa Rica).
- Provided technical collaboration to the Municipality of San José, promoting and supporting community-based risk communication actions and "house-to-house" campaigns in the communities.



### Surveillance, rapid response teams, and case investigation

- Collaborated with national authorities on the activation of the MOH Situation Room for the analysis of epidemiological information and decision-making for COVID-19, including preparation of operational technical documents.
- Coordinated with the MOH and CCSS on the national response to COVID-19, adapting PAHO/WHO protocols and recommendations (including prevention and control measures for the following sectors: health, justice, education, housing, human development, economy, tourism, culture, and youth, as well as local governments).
- Provided training on the Go.Data tool for monitoring patients and contacts, in coordination with the regional team.
- Supported the MOH to develop a proposal for the establishment of community-based epidemiological surveillance for priority areas.



## Points of entry, international travel, and transport

- Supported and advised national authorities to assess the implementation of public health measures and on strategies and procedures for the control and opening at points of entry into the country.



## National laboratories

- Supported the development and implementation of the Network of Public Health Laboratories' national laboratory plan for COVID-19.
- Trained INCIENSA personnel for molecular diagnosis of SARS-CoV-2.
- Donated to the MOH reagents and supplies for the molecular diagnosis of SARS-CoV-2, as well as 16,000 antigen tests for the CCSS.
- Promoted the implementation of genomic surveillance of COVID-19 with INCIENSA and CCSS, expansion of the COVID-19 diagnostic network, and updating of the diagnostic methods for SARS-CoV-2.
- Coordinated a binational meeting between Costa Rica and Argentina to share experiences in the production of hyperimmune equine serum for the treatment of COVID-19.



## Infection prevention and control

- Supported the review of quality and regulatory information on equipment and supplies donated by the country office to the national authorities.
- Supported the revision of the MOH guidelines for the opening of day centers for older adults.



## Case management

- Collaborated with priority municipalities to ensure integrated care for COVID-19 in vulnerable communities.
- Helped prepare the National Plan for Prehospital Services for COVID-19, with the MOH, Red Cross, CCSS, and the private sector.
- Advised on the inclusion of HRH management issues in the context of COVID-19 response.
- Developed recommendations on the establishment of alternative medical care sites (AMCS) for patient care.
- Supported a project on community participation in four cantons of the country, with inter-institutional and community input into work plans for the local response.
- Supported a project to address COVID-19 in indigenous territories with nine indigenous peoples to identify needs and strengthen local coordination.



## Operational support and logistics

- Supported the implementation of the PAHO/WHO Supply Management System (SUMA) for the CNE.
- Supported the inclusion of information from Costa Rica in the WHO COVID-19 Partners Platform and the procurement portal.
- Donated PPE, medical equipment, and other supplies for COVID-19 response to INAMU, DGME, ministries of justice and peace, CNE, CCSS, MS, INCIENSA, and Red Cross.
- Worked on a standard operating procedure to strengthen the use of the PAHO Strategic Fund in Costa Rica, in conjunction with CCSS, and the MOH.



## Maintaining essential health services during an outbreak

- Collaborated in the formulation of the plan to strengthen and expand CCSS health services.
- Supported the development of CCSS Health Services Indicators in Phase II of expanding services for the response to COVID-19.
- Advised on maternal and perinatal health in the context of COVID-19.
- Advised on the continuity of the delivery of prioritized essential health services for communicable and noncommunicable diseases, including malaria, arboviruses, influenza, mental health, cancer, smoking, and alcoholism.
- Advised on the implementation of strategies for the approach to mental health in the context of COVID-19.



## Preparing for the vaccine rollout

- Participated in and promoted the country's participation in information sessions on COVID-19 vaccines and the COVAX Facility, and provided guidance on planning, regulation, pharmacovigilance, and other related aspects for vaccine introduction in the country.
- Actively participated in the National Commission for Immunizations and Epidemiology.
- Supported the MOH Regulatory Unit to review actions recommended for the authorization of emergency use of the COVID-19 vaccine in Costa Rica, including the introduction of the Pfizer vaccine against SARS-CoV-2 by bilateral agreement.
- Promoted the country's participation in the regional program's COVID-19 vaccines simulation exercise, in support of the regulation and oversight of COVID-19 vaccines in Central America.



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

- Coordinated, on an ongoing basis, with the ministry of public health (MINSAP), United Nations agencies, multilateral partners, and accredited diplomatic missions in Cuba to strengthen the country's response to COVID-19.
- Spearheaded the immediate response of the United Nations System with the MINSAP while coordinating pillar 1 of the socioeconomic response plan to COVID-19.
- Informed MINSAP about the requirements and deadlines for participation in the COVAX Facility, with a view to accessing the COVID-19 vaccine.
- Collaborated with health authorities and the biopharmaceutical sector in the search for financing alternatives for the development of a Cuban vaccine candidate for COVID-19, as well as the local production of supplies.



### Risk communication and community engagement

- Supported the formulation of key health messages and strategies for risk communication and community participation.
- Prepared a list of decision makers and researchers for information sharing; information packages were delivered to those working on surveillance, care, and management of COVID-19.
- Developed infographics and videos with information on COVID-19 for people with disabilities, maternal and child health programs, older people, and tobacco users.
- Disseminated a package of manuals for psychosocial support, prepared by external experts in psychology and mental health, in alignment with PAHO recommendations.
- Managed press conferences and interviews with national and foreign media accredited in Cuba.
- Provided coverage and disseminated technical cooperation activities related to efforts to deal with COVID-19.
- Prepared two issues of the PAHO/WHO country office's *Andar la salud* Bulletin, related to confronting the pandemic.
- Contributed to the interagency risk communication work for COVID-19, including with UNESCO and RCO, in discrediting misinformation, and with UNICEF on preventing COVID-19 in schools.
- Reports prepared by the country incident management team were published weekly and disseminated widely.



### Surveillance, rapid response teams, and case investigation

- Participated in the training of national epidemiological surveillance and analysis teams.
- Disseminated updated WHO guidelines on COVID-19 surveillance.



### Points of entry, international travel, and transport

- Supported health promotion efforts by preparing communication materials on health and prevention of COVID-19, which were disseminated at all international entry points.



### National laboratories

- Procured equipment and supplies for surveillance and case detection, such as reagents, RNA extraction kits, body bags, means of transporting tests, and other supplies.
- Trained the team of the National Reference Laboratory for Respiratory Viruses on the diagnosis of SARS-CoV-2 through molecular biology and on genomic surveillance.



### Infection prevention and control

- Procured soap, disinfectants, supplies for hand washing and cleaning surfaces and autoclave equipment, as well as bags for the safe disposal of laboratory waste and PPE.
- Shared and disseminated PAHO and WHO protocols and guidelines for IPC in health facilities, prisons, and long-term care facilities, for consideration by the national authorities.
- Acquired digital thermometers and antibacterial gel for the safe reopening of schools, in coordination with the Ministry of Education.
- Promoted the dissemination of knowledge through communication with a gender perspective for self-care and collective care in the face of COVID-19 and its gender consequences in the school environment.



## Case management

- Procured pulse oximeters, two ultrasound machines, and medicines and medical supplies for the management of serious cases in the ICUs.
- Provided technical advice to the MINSAP to update COVID-19 protocols regarding the reorganization and expansion of health services.
- Facilitated exchanges of regional and global experiences for COVID-19 case management.
- Shared PAHO/WHO recommendations regarding the emergency use of unproven treatment options, reinforcing ethical and regulatory aspects and the need to generate reliable scientific evidence.



## Operational support and logistics

- Supported health authorities to estimate needs for PPE, medicines, and essential supplies.
- Coordinated with the national authorities and United Nations agencies on the use of the Global Platform, both in the technical and supply areas.
- Supported information and communication services for virtual meetings to exchange experiences.
- Supported, with official PAHO/WHO information, the development of country newsletters and platforms led by INFOMED, a PAHO/WHO Collaborating Center.



## Maintaining essential health services during an outbreak

- Provided guidance on modeling scenarios for health system planning and expansion.
- Supported the evaluation of hospital and isolation center readiness for the management of COVID-19 cases according to PAHO/WHO guidelines.
- Supported the reorganization of health services into comprehensive networks to maintain essential services, in addition to prioritized programs.



## Preparing for the vaccine rollout

- Supported the strengthening of the cold chain.
- Supported the country with the acquisition of syringes for the application of vaccines in testing stages.
- Led the interagency processes with WFP and UNICEF to support the country's vaccination plan.



## Dominica



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

- Produced daily COVID-19 briefs for the country.
- Provided in-country United Nations staff with PAHO and WHO guidelines and updates.
- Launched consultations with national health authorities on the development of country strategic preparedness and response plans according to WHO guidelines.
- Continued publication of the Country Office COVID-19 information bulletin, including measures taken to contain the spread of the virus and highlights of PAHO support to the Member States.
- Maintained the country office's IMST structure and adapted the members' roles to the pillars of WHO's strategic plan to facilitate implementation and reporting.
- Coordinated with the UNRC system on COVID-19 initiatives.
- Provided IT and communication equipment to strengthen the Health EOC.



### Risk communication and community engagement

- Participated in training for gender-based violence, immunization, use of the WHO/UNICEF Joint Reporting Form (JRF) for vaccines, Vaccination Week in the Americas, and psychological first aid.
- Conducted media briefings on PAHO's in-country support and collaboration with the MOH.
- Engaged with young people to ensure their participation in the Youth Leader Forum.
- Provided equipment for strengthening the Health Promotion Unit for production and dissemination of local communications materials.
- Convened a webinar on dengue response during the pandemic. The webinar targeted policymakers, health experts, medical and public health practitioners
- Produced video highlighting the contributions and issues faced by HCWs in COVID-19 response.
- Published case study featuring community health workers in Dominica leading the fight against COVID-19.



### Surveillance, rapid response teams, and case investigation

- Disseminated COVID-19 case definitions.
- Shared data collection tools, e.g., Excel line listing, revised case reporting form, and provided guidance on their use to strengthen COVID-19 surveillance.
- Delivered orientation on Go.Data, the WHO contact tracing software. Procured and implemented mobile application for contact tracing.
- Acquired two micro buses to strengthen contact tracing.
- Retrofitted the country's quarantine facility.
- Delivered orientation on applying the EpiEstim and CovidSIM models for short-term forecasting of cases.
- Provided technical guidance on the design of a COVID-19 community survey.
- Shared protocols for surveillance, contact tracing, and case identification with national health authorities.
- Supported early detection of cases through existing surveillance systems to inform and improve analysis and decision-making.
- Procured 10 infrared and 100 digital contact thermometers for surveillance and case management of persons with COVID-19.
- Strengthened capacity for surveillance and contact tracing by providing a vehicle and laptops to national health authorities.
- Trained medical doctors and other health professionals on WHO guidelines for ICD-10 coding of COVID-19 mortality.



### Points of entry, international travel, and transport

- Provided training in IPC, surveillance, and case management at ports.
- Provided technical advice regarding the reorganization of port facilities to facilitate case identification, quarantine/isolation, and referral.
- Regularly reviewed entry protocols for the reopening of borders as they became available and provided feedback to national health authorities as appropriate.
- Jointly hosted a webinar on "Considerations for resuming non-essential travel in the Caribbean."



## National laboratories

- Disseminated guidelines and protocols for COVID-19 testing.
- Procured/distributed RT-PCR enzymes, sample collection materials, extraction kits, and consumables.
- Trained laboratory staff in theoretical aspects of molecular diagnostics.
- Ensured laboratory capacity to detect cases with necessary tests and reagents, and to scale up capacity as more cases are detected.
- Conducted a webinar on scaling up laboratory testing in the Caribbean.
- Facilitated joint collaboration with the regional team to establish an emergency stock of COVID-19 laboratory materials for distribution to countries and territories in the sub-region.
- Conducted a training on molecular testing to establish on-island testing capacity.
- Disseminated updates on COVID-19 diagnostics, including recommendations for use of rapid antigen tests for COVID-19.
- Procured additional GeneXpert cartridges, laboratory test kits, and consumables to strengthen laboratories for diagnosis of SARS CoV-2.



## Infection prevention and control

- Procured PPE to reduce the risk of infection for health workers.
- Delivered IPC training in English and Spanish to nurses, doctors, and allied healthcare workers.
- Shared IPC guidelines.
- Installed WASH infrastructure in selected health facilities.



## Case management

- In the context of COVID-19, delivered training on clinical management of cases, mental health, management of pregnancy, and children and disabilities.
- Trained health personnel on the appropriate use of PPE.
- Shared case management guidelines with the national authorities.
- Improved the protection of healthcare workers to safely detect and deliver healthcare services.
- Supported six nurses in completing a certificate course in critical care. This aimed to deliver high-level critical care and scale up available human resources to respond in a timely manner in circumstances should there be a second or third wave
- Procured eight vital signs monitors, six ventilators, three infusion pumps, and five oxygen concentrators to augment capacity for management of COVID-19 cases.



## Operational support and logistics

- Provided logistics support to clear COVID-19 materials and supplies through customs for delivery to the MOH.



## Maintaining essential health services during an outbreak

- Provided technical guidance on the reorganization of the health system to respond to COVID-19 cases.
- Completed the first stage of the Joint Reporting Form (JRF), aimed at improving capacity to track implementation of the Global Vaccine Action Plan. The monthly reporting was established as part of the tracking mechanism to monitor effects of COVID-19 on the immunization program.
- Strengthen prevention of foot care for persons with diabetes and peripheral artery disease during COVID-19 through the procurement of Doppler ultrasounds and development of a training video.
- Trained health personnel online to implement the Self-Management for Chronic Disease Program. Provided manuals and tablets to support implementation of the program.
- Shared technical guidance for maternal care during COVID-19. Also prepared a summary fact sheet to share the latest evidence on the increased risk OF COVID-19 complications during pregnancy. Shared a data collection form for monitoring pregnant women.
- During the International Day of Older Persons on 1 October, shared messages, infographics and social media cards on COVID-19 and the health and rights of older persons. Guidance on the care of older persons during and after COVID-19 was also shared. Dominica implemented a full month of activities that included recognition of centenarians, a nationwide celebration of grandparents, religious activities, radio programs, and panels discussions.
- Provided support to strengthen and update the Perinatal Information System to include the COVID-19 module.



## Preparing for the vaccine rollout

- Conducted training sessions on ESAVI and cold chain management.
- Provided technical support for the development of COVID-19 National Vaccination and Deployment Plan; supported vaccine introduction readiness using the VIRAT.
- Technical guidance was shared and support was provided for the completion of the requirements of the COVAX Facility.

# Dominican Republic



## Country-level coordination, planning, and monitoring

- Engaged in high-level meetings with the government to present PAHO's recommendations on scenarios associated with the pandemic, including on the COVID-19 vaccines.
- Participated with other international agencies (IDB, UNICEF, and the World Bank) in meetings with the MOH on support to mitigate the impact of the pandemic and collaborate in COVID-19 vaccination efforts.
- Participated in multisectoral meetings, along with the MOH, to prepare and oversee mitigation and containment plans and consider specific needs (storm alerts, interventions in the provinces, etc.).
- In coordination with the MOH, prepared the Operational Plan for Response to the COVID-19 emergency, which was formally presented to the Health Cabinet, coordinated by the Vice Presidency of the Republic.
- Participated in the Needs Assessment for COVID-19 Recovery, together with the Ministry of Economy, Planning and Development, UNDP, and other United Nations agencies.



## Risk communication and community engagement

- Held media briefings alongside MOH counterparts to disseminate key messages.
- Supported the Department of Health Promotion and Education to update a guide for the home and community during the pandemic. Printed 20,000 copies (with USAID funding) to be distributed to key groups identified by the MOH.
- Worked with the media in order to promote prevention measures provided by national authorities and to position PAHO's technical cooperation in the country.
- Collaborated with the MOH risk management team to prepare a series of informative brochures that were distributed in communities nationwide.



## Surveillance, rapid response teams, and case investigation

- Supported the updating and strengthening of the information system of the General Directorate of Epidemiology (DIGEPI)
- Supported MOH to start up its Center for Intelligence and the Health Situation Room.

- Conducted training, together with GOARN, on the use of Go.Data for contact tracing and weekly training to update on program implementation. Supported in the installation of Go.Data in the National Epidemiology Directorate.
- Supported the surveillance team, including with simulations, projection models, and supplies, and created an information dashboard that was updated daily, through 31 December, with data from the MOH.
- Collaborated with the MOH to integrate national and provincial level data from several departments (DIS, DASIS, and DIGEPI) into the MOH Situation Room.
- Supported contracting health staff to strengthen surveillance and rapid response capacities in areas with the greatest community spread of COVID-19.
- Delivered 50,000 rapid antigen-based tests to the MOH national laboratory to monitor symptomatic contacts in the areas with the highest community circulation of the SARS-CoV-2 virus.



## Points of entry, international travel, and transport

- Worked with the Ministry of Health to develop materials in English and Spanish for the main points of entry.
- Facilitated a joint meeting with the government and local authorities from Dominican Republic and Haiti, to evaluate coordinated actions to mitigate the epidemic at the border zone.
- Coordinated with UNCT on an action plan to support the country and Haiti through binational cooperation.
- Worked with IOM on surveillance, IHR core capacities, migratory status, and reopening the economy, while ensuring access to services at the border and focusing on Haitian workers.



## National laboratories

- Delivered test kits, extraction kits, reagents, means of transporting the virus, and other supplies to the national laboratory.
- Provided diagnostic training for private laboratories, including donating kits.
- Arranged contracting of health staff to build capacity in the national laboratory.
- Supported the mobilization of technicians from the national laboratory to the areas with the greatest community circulation of COVID-19 for sampling, safety, and transport of SARS-CoV-2 samples.



## Infection prevention and control

- Trained teachers and educational staff in IPC and other key areas through a series of webinars in conjunction with the Universidad Iberoamericana, the Dominican Initiative for a Quality Education, the Association of Private Educational Institutions, and the Pontificia Universidad Católica Madre y Maestra.
- Delivered supplies to civil society organizations working with people living with HIV and sex workers.
- Donated 720,000 masks, including to the Expanded Program of Immunizations (100,000), General Directorate of Prisons (520,000) and the National Council of Disability-CONADIS (100,000).



## Case management

- Supported the national health services (SNS) to prepare protocols and manuals.
- Collaborated with the SNS to implement the COVID-19 Global Clinical Data Platform project in three hospitals in the province of Santiago, and participated in follow-up meetings on the implementation of the Platform.
- Together with SNS and PUCMM, worked on the first phase of implementation of the project on strengthening the capacities of the first and second levels of care in the border provinces (Independencia and Dajabón).
- Supported the MOH's interest in the country's participation in the Solidarity clinical trial.



## Operational support and logistics

- Managed the storage of 49 tons of PPE, which was donated to the Health Cabinet to be used by health workers.
- Supported the mobilization of experts to the territories to strengthen human resources in detection and diagnosis of SARS-CoV-2.
- Delivered two water treatment kits (mobile water treatment plants) to be used in two MOH mobile hospital.



## Maintaining essential health services during an outbreak

- Supported the implementation of the EMT initiative and strengthened EMTs with training in water management.
- Collaborated in the implementation of the Multi-Hazard Event Response Framework with preparedness measures for the response to the 2020 hurricane season and COVID-19.
- Supported the review and updating of the MOH legal framework for health risk management.
- Supported the structural evaluation of the municipal hospital of Esperanza in the Valverde Mao province and the evaluation of the correct use of the mobile hospital, which is being used provisionally.
- Collaborated with health authorities to evaluate hospital readiness for managing cases.
- Identified health centers for the establishment of alternative medical care sites.
- Strengthened capacities for protecting mental health.
- Supported the country with modeling/estimating efforts to plan, including for ICU and hospital bed needs.
- Supported the National Health Service in its expansion plan for the Hospital Centers Directorate, in order to ensure timely access to health services.
- Collaborated with the MOH to develop general guidelines for the progressive return to normalcy in public and private health centers, after the de-escalation phase announced by the Government.
- Supported the MOH to complete adjustments in the tuberculosis laboratory; in addition to supporting the epidemiological and laboratory surveillance of dengue, malaria, and other arboviruses.



## Preparing for the vaccine rollout

- Supported in the preparation of the National Vaccination Plan, technical guidelines, oversight manual, and vaccinator's manual.
- Participated in the meetings of the COVID-19 Vaccine Advisory Committee.
- Supported the definition of the vaccination card and the vaccination recording form.
- Supported the design of training documents for health personnel who will be in charge of carrying out the vaccination.

# Dutch Island Territories

[Aruba, Bonaire, Curacao, Saba, Sint Eustatius, Sint Maarten]



## Country-level coordination, planning, and monitoring

- Supported national authorities and health agencies to formulate strategies to address COVID-19 response.
- Provided technical guidance to focal points in the countries participating in Crisis Management Teams.



## Risk communication and community engagement

- Shared PAHO/WHO guidelines for risk communication, especially physical distancing, use of masks, re-opening of schools, coping with the stressors, and safe hygiene practices.
- Provided technical guidance to Sint Maarten to reach migrants in the community to provide information on physical distancing and safe hygiene practices and to encourage those feeling ill to get tested.
- Shared guidelines on economic reopening, especially for hotels and other accommodations, with counterparts in Aruba, Curacao, and Sint Maarten.
- Shared guidelines for the reopening of borders to international travel with Aruba and Sint Maarten.



## Surveillance, rapid response teams, and case investigation

- Hosted a webinar on COVID surveillance and interruption of transmission.
- Provided technical support to Aruba, Curacao, and Sint Maarten to enhance the collection and analysis of surveillance data for submission of reports to PAHO/WHO that are included in the COVID-19 dashboard.
- Convened discussions with the Sint Maarten Department of Health about contact tracing protocols for COVID-19 cases, all of which were imported and arrived before the borders were closed.



## National laboratories

- Supported the disaggregation of COVID-19 data for Bonaire, Sint Eustatius, and Saba provided to WHO, PAHO, and the U.S. Centers for Disease Control and Prevention (CDC) to allow for island-specific data to guide travel advisories given the difference in transmission rates among these three territories.
- Shared PAHO/WHO guidelines on COVID-19 PCR testing with the Sint Maarten Department of Health and provided guidance on the limitations of the use of rapid testing, which was presented to the Council of Ministers.
- Shared WHO guidelines with Saba for the establishment of a drive-through testing facility.



## Infection prevention and control

- Provided technical assistance with the development of the IPC guidelines for older people and long-term care facilities, children's homes, and residential healthcare facilities.
- Hosted a webinar on the reopening of schools in the context of COVID-19.
- Provided technical assistance on infection prevention and control for homecare of patients with mild COVID-19 symptoms.
- Hosted webinar on "Caring for the Caregiver, protecting your mental health when caring for others."
- Shared several guidance documents and provided responses to a number of questions on IPC and WASH



## Case management

- Conducted a virtual session on COVID-19 clinical management for all Dutch-speaking countries/territories.
- Provided technical guidance to Aruba and Curacao on mental health and psychosocial support for COVID-19 and ensured participation in all virtual mental health webinars.
- Conducted a two-day virtual training of 30 mental health and substance use service providers in Aruba and Curacao in the management of substance use disorders in the context of COVID-19.
- Trained representatives from Aruba and Sint Maarten in mental health and psychosocial support (MHPSS) as part of the first PAHO virtual MHPSS course.



## Maintaining essential health services during an outbreak

- Provided technical assistance to Aruba and Curacao on the reorganization of mental health services as they move through the different phases of reopening.
- Collaborated with national authorities in Aruba on the continued reorganization of mental health and substance use services as part of their socioeconomic rebuilding and recovery efforts during the COVID-19 pandemic.
- Collaborated with counterparts in Aruba on a roadmap and proposed methodology for the development of the National Health Plan, considering the reorganization and streamlining of the healthcare system to improve the efficiency of their response to future disasters.
- Provided support to Aruba and Curacao to purchase vaccines to maintain the implementation of their immunization programs.
- Provided technical assistance to assess disability services within the context of COVID-19 in Aruba.

- Supported the capacity assessment of the mental health and substance use service providers as the first step in the reorganization of services that are more integrated, people-centered, high-quality, and accessible to all.
- Facilitated a disability and rehabilitation situational analysis in the context of COVID-19 in Aruba.
- Provided technical assistance to Aruba to develop a National Strategic Framework for the health sector. This activity supported the health sector reform considerations that have been mandated by the Netherlands as part of Aruba's COVID-19 stimulus package.



## Preparing for the vaccine rollout<sup>2</sup>

- Shared the information received from PAHO/WHO on the planning of the COVID-19 vaccination process.
- Shared information and discussed the COVAX Facility with Aruba, Curacao, and Sint Maarten.

<sup>2</sup> The COVID-19 vaccines for the Dutch Caribbean will be provided through the Netherlands, not through the COVAX Facility. The Netherlands National Institute for Public Health and the Environment (RIVM) has been working with the islands to develop their logistics plans and has already shipped the special refrigerators to the islands.



## Ecuador



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

- Collaborated directly with Ecuador's Ministry of Public Health (MOH) and its health emergency operations center to develop and implement the national COVID-19 preparedness and response plan.
- Activated the Health Action Group of humanitarian team to formulate a response to COVID-19.
- Coordinated with the technical working group on mental health to adapt and adopt PAHO/WHO protocols and methodologies for epidemiological surveillance, entry points, IPC, case management, coordination, and risk communication.
- Deployed experts in surveillance, contact tracing, reorganization of health services, and organization of the national emergency response structure.
- Developed territory-level health cooperation activities to strengthen, inter-group, epidemiological surveillance, risk management, health services and infection prevention and control, and to carry out health measures with related civil society organizations.
- Collaborated with the Working Group on Refugees and Migrants, the health group responsible for coordinating activities for people with limited mobility.



### Risk communication and community engagement

- Supported the formulation of a national education and communication plan on COVID-19 and trained the relevant staff to implement it.
- Helped design and implement a health promotion and risk communication plan for indigenous peoples, Afro-descendants, and Montubios and supported the development and validation of an inter-cultural protocol for the prevention and care of COVID-19 patients. Trained journalists and communicators from these populations, as well as community broadcasters, to disseminate key messages.
- Adapted and printed risk communication materials, adapted to indigenous communities; held weekly meetings with community and youth leaders.



### Surveillance, rapid response teams, and case investigation

- Supported the MOH to develop and implement national guidelines for the containment and mitigation of COVID-19 and analysis of trends and indicators to examine excess mortality.
- Delivered computer equipment to the national epidemiological situation room and hired thirteen officials to manage the databases at the provincial level.
- Provided technical advice and supported the creation of a risk assessment tool based on COVID-19 monitoring indicators.
- Hired professionals to support COVID-19 preparedness and response in eight provinces.
- Collaborated in the training and follow-up of a COVID-19 case database, in line with WHO's global pandemic monitoring actions.



### Points of entry, international travel, and transport

- Provided guidance for updating contingency plans for designated entry points into the country; developed a list of key actions related to alerts, preparedness, and response for entry points without an official designation, but which may pose public health risks.



### National laboratories

- Provided technical advice on molecular diagnostics to the country's network of decentralized laboratories in Guayaquil, Quito, and Cuenca; donated laboratory supplies to maintain the reference pattern for COVID-19 PCR diagnosis.
- Supported the deployment of a technical laboratory team from the Guayaquil branch of the National Institute of Public Health Research (INSPI) to Quito and Cuenca to strengthen the processing of samples from Guayaquil. Opened a branch laboratory in the province of Napo to strengthen diagnostic capacities in the Ecuadorian Amazon.



### Infection prevention and control

- Supported the MOH to develop and implement infection prevention and control guidelines for the health sector.
- Provided PPE and body bags to institutions to support the country's response to COVID-19 and the management of corpses; conducted in-person training on IPC.



## Case management

- Provided assessments for the reorganization and expansion of Ecuador's health services to respond to COVID-19, including provincial gap analysis and detection for 303 hospitals.
- Trained Ecuador's country teams to manage emergency medical teams, establish alternative medical care sites, and use triage-adapted tents and housing units.
- Trained health workers in public hospitals and the armed forces hospitals to assess their readiness to address the COVID-19 pandemic.
- Supported the development of guidelines for patient management and pregnancy and neonatal care.
- Provided the MOH and the Ecuadorian Institute of Social Security (IESS) with a tool to calculate the needs of hospitalized patients and define the capacity limits of the hospital response.
- Provided advice to the MOH on the requirements for participating in the Solidarity trial.
- Provided training to primary care medical staff in remote areas with a high proportion of indigenous populations and less access to health services on the use of the case management algorithm for suspected cases of COVID-19.
- Strengthened capacities in first-level health centers to provide oxygen therapy treatment in hard-to-reach areas.



## Operational support and logistics

- Collaborated in training logistics technicians on the use of SUMA and SISTOCK computer programs to manage supplies and medicines during emergencies.



## Maintaining essential health services during an outbreak

- Collaborated with the MOH and other partners to evaluate strategies to ensure continuity of vaccination, antimalarial, tuberculosis and HIV/AIDS programs.
- Helped formulate, revise, and adapt WHO and PAHO guidelines for vaccinations and maternal and childcare (including newborns) during the COVID-19 emergency.
- Trained primary health care staff in prioritized provinces to organize and maintain essential health services during the pandemic.
- Supported the implementation of psychosocial tele-support for the general population and the organization of a mental health response plan.
- Collaborated in creating a virtual course on mental health designed to reduce gaps in specialized service providers and strengthen competencies of health teams to respond to the demand for psychosocial care.



## Preparing for the vaccine rollout

- Provided up-to-date information on the status of the development of a COVID-19 vaccine and worked with the MOH to understand/utilize the COVAX Facility.
- Developed and transmitted guidance to plan the introduction of a COVID 19 vaccine into the national Expanded Program on Immunization.



## El Salvador



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

- Provided ongoing support to national authorities in data analysis, preparedness for the response, and the monitoring of the evolution of the pandemic.
- Provided technical assistance to MOH on priority health issues, such as vaccination coverage, care for vulnerable populations, and maternal and child mortality.
- As the lead agency for Pillar 1 (Health First), followed up on the implementation of the WHO response plan (Partners Platform) and worked with the United Nations System to prepare the Socioeconomic Response Plan.
- Coordinated the health cluster of the Humanitarian Country Team. Approximately 20 institutions that work in health in El Salvador financially support the national response.
- Advised foreign missions of France, Canada, the United States of America,, and others on which areas could benefit from external support, within the framework of the national preparedness and response plan.



### Risk communication and community engagement

- Provided ongoing support for risk communications, using PAHO's in-country social media networks.
- Worked with the MOH Communications Unit to prepare the vaccination plan.
- Coordinated with UNICEF on the design of an integrated communications plan and supported the preparation of a national plan. Provided technical documents to communications teams in the nine member institutions that make up the National Health System, for incorporation into their institutional plans.



### Surveillance, rapid response teams, and case investigation

- Provided technical support for the creation of the Situation Room to monitor behavior and analyze information.
- Monitored the implementation of case modeling using available tools. All information related to COVID-19 in El Salvador is online [here](#).
- Collaborated in the definition of key epidemiological variables for their incorporation into the Epidemiological Surveillance Information System (VIGEPES).
- Beginning in February 2020, supported the Epidemiology Directorate to monitor cases of pneumonia in health facilities.
- Collaborated in the detection of cases of multisystemic

inflammatory syndrome in children and adolescents (under 19 years of age) and in the implementation of the pilot application of the Perinatal Information System COVID-19 module in five hospitals.



### Points of entry, international travel, and transport

- Supported the country's IHR focal point and maintained constant communication with all countries and headquarters to monitor the pandemic.
- Shared updates on containment measures and WHO recommendations for working at air, sea, and land points of entry.



### National laboratories

- Delivered laboratory supplies and trained staff to use tools that allow for the extraction of the virus and processing of tests.
- Delivered approximately 600,000 RT-PCR tests since the onset of the emergency.
- Engaged in constant communication with the National Reference Laboratory, PAHO/WHO Country Office, and headquarters to constantly provide updates on diagnostic materials and available tests.
- Assisted in preparing protocols and standard operating procedures for the processing and interpretation of laboratory results.
- Supported the inclusion of El Salvador as a pilot country in the use of rapid antigen-based tests.
- Followed up the notification of the SARS-CoV-2 virus in the framework of sentinel surveillance of influenza and other respiratory viruses.



### Infection prevention and control

- Delivered a shipment of PPE to support authorities to care for patients.
- Distributed technical information and guidelines produced by PAHO/WHO on the management of COVID-19 infections and other infectious diseases.
- Coordinated virtual training on the approach to IPC and shared updated information, with an emphasis on the surveillance of IAAS in hospitals providing care for critically ill patients.



## Case management

- Delivered medical equipment to manage COVID patients and for use in health facilities (wheelchairs, electrocardiographs, lecterns, medicine carts, among others).
- Acquired medications to ensure the management of patients with HIV/TB as a key area of focus in the context of the pandemic.
- Systematically shared PAHO/WHO information and recommendations for treatment of cases.



## Operational support and logistics

- Supported hospitals to assess needs; provided advice on the acquisition of needed supplies, using funds for pandemic response.
- Provided technical assistance to the external cooperation office of the MOH to expedite shipments.
- Coordinated with the National Directorate of Medicines to define abbreviated procedures for the importation of equipment and supplies to respond to COVID-19.



## Maintaining essential health services during an outbreak

- Worked with the first level of care, the hospital directorate, and health promotion to ensure the continuity of all health services, especially those associated with NCDs, mental health, and access to medications.
- Supported the arrival of vaccines and supplies to ensure vaccination at all times despite restrictions on movement within the country.
- Supported the development of pandemic management plans for the progressive reopening of essential primary care services, for morbidities such as HIV, TB, and vector-borne diseases (such as malaria, dengue, among others).
- Provided technical assistance to the vector control program to reactivate arbovirus vector control activities, with an emphasis on dengue and the malaria elimination process.



## Preparing for the vaccine rollout

- Supported the implementation of the VIRAT/VRAF as a mechanism for the self-assessment of progress in vaccine preparedness.
- Worked with national authorities to develop the components of the National Plan for the Deployment of COVID-19 Vaccines.
- Supported the updating of National Immunization Technical Advisory Group (NITAG) as a fundamental step in the preparation of the plan.
- Accompanied the processes required by COVAX to receive the vaccines in El Salvador.
- Supported preparation of technical guidelines for purchasing supplies, cold chain equipment, information registration, and the EPI crisis room, either with national funds or donations from PAHO or other partners.

# French Departments

(French Guiana, Guadeloupe, and Martinique)



## Surveillance, rapid response teams, and case investigation

- Shared PAHO's surveillance guidelines to facilitate the exchange of epidemiological information among the French departments (French Guiana, Guadeloupe, and Martinique), the IHR focal point in France, and the IHR regional contact point for the Americas.
- Shared COVID-19 case definitions with department-level health authorities.
- Facilitated the sharing of information between Brazil, Guyana, French Guiana, and Suriname regarding the dynamics of COVID-19 in the Guyanese Shield.



## Points of entry, international travel, and transport

- Collaborated closely with counterparts from the French Departments to conduct joint risk assessments, particularly regarding outbreaks on cruise ships and their movement in the Caribbean.



## National laboratories

- Shared PAHO and WHO guidelines for laboratory molecular testing.



## Case management

- Facilitated the exchange of the French Departments' experiences in COVID-19 clinical management with other countries and territories in the Eastern Caribbean.



## Grenada



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

- Adapted the national Influenza Pandemic Plan to COVID-19.
- Strengthened the coordination of the COVID-19 response at the national level.
- Launched consultations with national health authorities to develop country strategic preparedness and response plans, according to WHO guidelines.
- Continued publication of PAHO's country COVID-19 information bulletin, including measures taken by countries to contain the spread of the virus and highlights on PAHO support to the member states.
- Coordinated with the UNRC system on COVID-19 initiatives.



### Risk communication and community engagement

- Produced and distributed posters and booklets on preventive public health measures.
- Provided banners for placement at points of entry.
- Helped develop social media tools and public service announcements to address stigma and suicide prevention.
- Disseminated risk communication information to citizens and travelers.
- Provided technical support to develop and disseminate social media cards to support healthy nutrition.
- Developed a breastfeeding campaign using various media platforms; developed posters; and aired a video "Safe Breastfeeding during COVID-19" on national TV stations.
- Procured equipment to strengthen the Health Promotion Unit to produce and disseminate local communications materials.
- Produced video highlighting the contributions and issues faced by HCWs in the COVID-19 response.
- Conducted a webinar on dengue response during the pandemic, targeting policymakers, health experts, and medical and public health practitioners.



### Surveillance, rapid response teams, and case investigation

- Introduced data collection tools, e.g., Excel line listing, revised case reporting form.
- Offered training on Go.Data, the WHO contact tracing software for data capturing and monitoring the chain of transmission.
- Provided orientation on EpiEstim and CovidSIM, mathematical models for short-term forecasting of COVID-19 cases.
- Contracted a short-term surveillance officer to strengthen contact tracing.

- Provided orientation for national epidemiologists and laboratory personnel on the PAHO regional program for influenza laboratory-based surveillance for SARI/ILI and its link to COVID-19.
- Collected weekly data on COVID-19 trends; contact tracing was improved by contracting a surveillance officer.
- Procured computers for data entry and analysis in the surveillance unit.
- Trained medical doctors and other health professionals on WHO guidelines for ICD-10 coding of COVID-19 mortality.



### Points of entry, international travel, and transport

- Assessed capacity at the international airport to ensure effectiveness of surveillance systems.
- Provided technical guidance on considerations for the phased reopening of borders.
- Regularly reviewed entry protocols for the reopening of borders as they became available and provided feedback to national authorities.
- Provided equipment, such as IT tools, for data collection and case detection at points of entry.
- Hosted a webinar on "Considerations for resuming non-essential travel in the Caribbean."



### National laboratories

- Disseminated guidelines and protocols and provided training for RT-PCR detection.
- Procured sample collection materials, a RT-PCR machine, enzymes, extraction kits, and other supplies.
- Ensured laboratory capacity to detect COVID-19 cases providing the necessary tests and reagents, and to scale up capacity as more cases are detected.
- Hosted a webinar on scaling up laboratory testing in the Caribbean.
- Collaborated with the regional team to establish an emergency stock of COVID-19 laboratory supplies for distribution to countries and territories in the sub-region.
- Facilitated training by the regional team on molecular testing to establish on-island testing capacity.
- Disseminated updates on COVID-19 diagnostics, including recommendations for use of rapid antigen-based tests.
- Procured additional GeneXpert cartridges, laboratory test kits, and consumables in support of laboratory strengthening for diagnosis of SARS-CoV-2.



## Infection prevention and control

- Strengthened IPC capacity for HCWs through in-person and virtual training and provided PPE.
- Supported the country's reopening strategy by training hotel workers in situations where hotels are being used as quarantine sites for repatriated Grenadian nationals.
- Provided hand washing and hand sanitizing stations to health care facilities as part of ongoing support for protection of HCWs.



## Case management

- Provided training in hospital bed assessment and supply management tools.
- Strengthened the country's ability to deliver mental health and psychosocial support (MHPSS) to HCWs, in the context of COVID-19.
- Strengthened telehealth services and community engagement to provide psychosocial support.
- Improved the local health system's capacity and protected healthcare workers to safely diagnose COVID-19 and deliver healthcare services.
- Procured six vital signs monitors, six ventilators, two infusion pumps, and five oxygen concentrators to augment capacity for management of COVID-19 cases.



## Operational support and logistics

- Supported the delivery of supplies and equipment through the Regional Security System.



## Maintaining essential health services during an outbreak

- Using PAHO's Virtual Campus for Public Health, two case studies were tailored to HCWs.
- Conducted webinars on the reorganization and expansion of services, including managing emergency medical teams (EMTs), maternal and perinatal care, children with disabilities, and the Expanded Program on Immunization.

- Implemented a school policy to support the reopening of schools, reconfiguring school resources, and ensuring adequate physical activity which may be hampered by public health measures.
- Established a committee to scale up essential services to address gender-based violence (GBV); developed a work plan with multisector input and SOPs.
- Developed and subsequently updated guidance for IPC in shelters for survivors of GBV, which is being translated to Spanish.
- Developed a framework and SOPs to strengthen essential services provided to women and girls who have been victims of violence, offering clear directives to stakeholders involved in supporting and aiding victims/survivors.
- Retrofitted and equipped shelters managed by the NGO CEDARS for women and children to continue providing services in a safe and quality environment.
- Organized a panel discussion on the future of youth employment post COVID-19 for 42 participants.
- Strengthened the capacity of the vector control program to respond to the dengue outbreak by providing insecticide application equipment, insecticides, and entomological supplies.
- Training was conducted on the perinatal information system in preparation for the implementation of the program in 2021.



## Preparing for the vaccine rollout

- Conducted training sessions on ESAVI and cold chain management.
- Provided technical support for the development of COVID-19 National Vaccination and Deployment Plan, and for using the VIRAT to assess vaccine introduction readiness.
- Technical guidance was provided to complete the requirements of the COVAX Facility.

## Guatemala



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

- Collaborated with coordinating mechanisms such as the EOC, IHR Committee, network of international health partners, and the Health Cluster.
- Supported the Ministry of Health and Social Assistance (MSPAS) in the organization and weekly (and later biweekly) operation of the Health Cluster and the formation of six working subgroups to support the coordination and response of the partners in the different areas of health.
- Contributed to the socioeconomic analysis of COVID-19 conducted by the United Nations System in Guatemala, as well as the preparation of the socioeconomic response plan.
- Within the framework of the Health Cluster and its working subgroups, supported the completion of analyses on the impact of COVID-19 on the continuity of essential services, in particular: TB, HIV and malaria; mental health; maternal health and SRH; and indigenous peoples.
- Supported the MSPAS in the systematization of institutional practices in response to the COVID-19 pandemic in Guatemala.



### Risk communication and community engagement

- Produced risk communication materials, including almost 70,000 posters on topics such as handwashing, isolation, and PPE; trained healthcare workers to better inform the public.
- Trained 260 journalists, in coordination with other United Nations agencies.
- Supported the MSPAS in the development of key messages and videos that were translated into five Mayan languages.
- Provided support in developing a campaign against stigma and discrimination, preparation of key messages for a strategy to track cases and contacts, and production of videos in support of vaccination during the pandemic and videos of hand washing and PPE donning.
- Under the coordination of UNICEF and with technical support from PAHO/WHO, inaugurated the virtual course for young communicators at community radio stations, with the participation of more than 400 people.
- Supported the MSPAS to develop a COVID-19 communication plan for the coming months, with the participation of allied partners, within the framework of the Risk Communication Subgroup.

- Held discussions to address risk communication with educators and health promoters; 300 people participated.
- In the framework of COVID-19, supported the MSPAS to review, update, and implement the multi-hazard risk communication strategy in Guatemala.
- Developed communication materials for the prevention of COVID-19 among indigenous peoples and prevention of violence against women in the context of COVID-19.



### Surveillance, rapid response teams, and case investigation

- Trained 300 health workers in surveillance, laboratory, hospital, and social communication.
- Supported the country in analyzing and visualizing the virus' effective reproductive rate and in projecting how the virus will spread, considering implemented public health measures.
- Supported the MSPAS in the development of the COVID-19 situation dashboard, a tool that provides epidemiological information updated daily.
- Supported the MSPAS and the Municipality of Guatemala to develop a strategy for tracking cases and contacts. This proposal was later adapted to the rural context.
- Continued to provide technical support to the MSPAS in the adaptation and implementation of the Go.Data platform; trained supervisors and staff responsible for monitoring; and gave technical support to the health area directorates and the creation of dashboards for monitoring contact tracing performance indicators.
- Supported the development of the methodology to analyze excess mortality from COVID-19.
- Provided technical support for the development, review, and regular update and dissemination of the surveillance protocols.
- Together with the MSPAS, carried out analysis of the epidemiological behavior of COVID-19 in the country and prepared a scientific article on the impact of the introduction of antigen tests on access on the diagnosis of SARS-CoV2 infection in Guatemala.
- Provided computer and audiovisual equipment to the technical surveillance teams at the central and local level of the MSPAS to improve the ability to report information, as well as their participation in virtual meetings and workshops.
- Supported in the formation, training, and deployment of integrated rapid response teams to the areas of active community transmission of COVID-19 affected by storms Eta and Iota.



## Points of entry, international travel, and transport

- Supported the authorities and relevant government institutions to identify designated COVID-19 facilities, managing points of entry, and working with individuals returning from abroad.
- Supported the MSPAS in the planning and implementation of a simulation exercise to prepare for the response to outbreaks.
- Supported the MSPAS in discussions with counterparts and other stakeholders and in preparing a technical document with the public health considerations to resume international traffic.
- Provided cooperation to the MSPAS for the elaboration of guidelines for the reopening of entry points, (land and air border crossings).
- Supported the updating of national plans and guidelines for the health response to events of massive flow of people in a situation of migration in the context of COVID-19.



## National laboratories

- Conducted training on laboratory response through subregional training in Mexico.
- Provided primers, probes, enzymes, and kits to conduct PCR tests.
- Accompanied the National Health Laboratory in the analysis and evaluation of delays in the processing of samples and in the flow of information with other laboratories.
- Supported the MSPAS in the integration of Guatemala into the regional network for genomic surveillance of the COVID-19 virus in the Americas.
- Strengthened diagnostic capacities (with the purchase of equipment, supplies, and reagents and training) for the detection of SARS-CoV-2 in the national laboratory and three sentinel laboratories for respiratory viruses.
- Supported the national laboratory by sending samples for SARS-CoV-2 genomic sequencing to the reference laboratory, Fiocruz in Brazil.



## Infection prevention and control

- Trained 3,697 health workers on IPC measures and 976 others on WASH measures.
- Advised in the assessment of temporary facilities for people with COVID-19 in Guatemala City and in 51 hospitals (including 5 temporary hospitals).
- Provided IPC training to 420 medical students at the Universidad de San Carlos.

- Together with the Guatemalan Association for Infectious Diseases and the CDC, designed a free online course on prevention, control, and management of COVID-19. Three thousand health professionals participated and staff were trained in three hotels designated for managing certain patients.
- Supported the country with the donation of PPE, including 130,282 masks; 51,414 disposable gowns; 26,910 pairs of gloves; 3,839,485 surgical masks; 153,510 respirators; 41,747 pairs of goggles.
- Provided technical support to national and subnational health authorities in the establishment of triage, isolation, and strengthening of IPC practices in 22 prioritized health facilities in the framework of COVID-19.



## Case management

- Provided guidance on preparing staff in health facilities to treat infected persons and for intensive care.
- Trained more than 100 health workers on prehospital emergency services and 1,458 people in case management and reorganization of health services.
- Helped MSPAS to apply, in 22 hospitals, the readiness checklist to expand health services.
- Advised the Guatemalan Institute of Social Security on the evaluation and organization of its services, including the use of hotels for the management of patients with mild symptoms.
- Provided guidance on treating child and adult patients, pregnant women, newborns, adolescents, and for family planning.
- Trained more than 10,000 people in the handling of corpses, through the virtual course developed in coordination with the MSPAS, the INACIF School of Forensic Sciences and the ICRC.
- Provided technical support on medical care to 46 hospitals in the network; support for the organization of temporary hospitals and offering guidance on planning human resources for health.
- Supported the MSPAS in the organization and strengthening of the first level of care for the response to the COVID-19 pandemic, prioritizing the most vulnerable health services and focusing on the continuity of essential programs.
- Supported the MSPAS in the development of technical guidelines for the costing of health services for COVID-19 and the adaptation of the PERC (production, efficiency, resources, and costs) hospitals tool.



## Operational support and logistics

- Provided training on the use of tools to calculate needs for supplies, medications, and PPE.
- Provided support on logistics and incident management, as well as procurement mechanisms.
- Facilitated donations of oxygen concentrators and other related supplies.
- Facilitated the distribution of more than 31 tons of personal protection supplies for health workers in the hospital network.
- Facilitated the clearance and distribution of donations of oxygen concentrators, PPE, COVID-19 tests, and reagents and other related supplies for COVID-19 care.



## Maintaining essential health services during an outbreak

- Promoted measures to protect people in conditions of vulnerability, including people with disabilities, pregnant women, newborns, migrant populations, among others.
- Supported country to develop strategies to address health-related issues arising from migrants, asylum-seekers, and persons returning from abroad, and measures to protect other persons in conditions of vulnerability, such as persons with disabilities and pregnant women.
- Supported the Health Cluster subgroups in preparing work plans for the continuity of essential services.
- In coordination with the Nutrition Cluster, coordinated discussions among national and international experts and national authorities on breastfeeding and COVID-19; 1,600 people registered and the information reached more than 423,700.
- Trained 4,600 professionals in maternal and newborn, adolescent and youth health, and family planning and contraception, together with UNFPA, UNICEF, and Tula Salud.

- In coordination with the MSPAS, supported the development of a virtual course to train health personnel to implement sociocultural measures for the prevention, containment, and management of COVID-19 cases at the community level in indigenous peoples of Guatemala.
- Provided technical support to the MPSAS to strengthen the capacities of health workers, area managers, and hospitals, in mental health and psychosocial support in the context of COVID-19.



## Preparing for the vaccine rollout

- Established a national committee to support the introduction of the COVID-19 vaccine, with participation of the private sector, medical associations, and other United Nations agencies.
- Supported the revision of the surveillance protocol for measuring the effectiveness of the COVID-19 vaccine and the impact of its introduction.
- Provided support to the National Immunization Program to prioritize groups for the COVID-19 vaccine, diagnosis, and estimates of needs for vaccines and supplies, personnel, cold chain requirements and logistics.
- Facilitated coordination and dialogue between health authorities and strategic partners and allies of the United Nations System, bilateral agencies, and other cooperation agencies, to support the introduction of the COVID-19 vaccine.
- The MSPAS, the Guatemalan Social Security Institute (IGSS) and PAHO/WHO signed an agreement to incorporate the IGSS into the COVAX Facility.



## Guyana



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

- Supported the activation of the Health Emergency Operations Center (HEOC); revised the terms of reference and standard operating procedures; and assisted in daily reporting.
- Supported coordination of health sector efforts to combat COVID-19 with other national EOCs and those of other partners. Supported the decentralization of HEOC to selected regions and provided needed equipment.
- Assisted with the development of the COVID-19 Preparedness and Response Plan; developed guidance for sub-national preparedness and response plans; contributed to a risk assessment of COVID-19 public health and social measures.
- Prepared a proposal for the creation of a National CDC Guyana.
- Assisted the Measures Assessment Committee to monitor phases throughout the pandemic.



### Risk Communication and Community Engagement

- Assisted in the preparation of the national risk communication plan.
- Conducted periodic press conferences with the local media, in collaboration government authorities.
- Assisted with development and distribution of information and communication materials. Provided technical support for the development of COVID-19 ads on television and in print for all 10 regions.
- Conducted COVID-19 sensitization sessions with United Nations staff.
- Provided technical assistance and materials for the production of a COVID-19 sitcom.
- Coordinated, with the MOH, a social media campaign on the facts and myths surrounding COVID-19, with live Q&A.
- Developed a MHPSS information and communications campaign for the public and select target groups.
- Helped develop a campaign of IEC (information, education, and communication) materials for the rollout of the vaccination campaign.



### Surveillance, rapid-response teams, and case investigation

- Conducted training on contact tracing and case definitions.
- Provided support for the implementation of Go.Data for case management, contact tracing, and follow-up. Installed and configured Go.Data in the Surveillance Unit and provided training.

- Provided technical support and training on epidemic modeling to define potential disease scenarios and the implications on adopting, adjusting and lifting of social distancing measures.
- Produced a weekly Epidemiological Bulletin; analyzed data; and prepared reports on transmission rate.
- Analyzed data and provided advice related to testing rates and a modeling of the expected evolution of the pandemic in two remote regions.
- Developed SOPs for epidemiological case investigation and trained trainers.
- Developed a protocol for a seroprevalence survey.
- Helped expand the number of field surveillance officers in selected regions and provided the tools and equipment needed for data collection and reporting.



### Points of entry, international travel, and transport

- Identified and mapped official and informal points of entry (POE) and helped carry out a baseline assessment of key capacities and resources needed for screening and referral of suspect imported cases.
- Assisted in the development of a POE screening tool and conducted training on case definitions.
- Provided technical support to estimate supplies, equipment, and needs for PPE required to establish an isolation area at all official and informal POEs.
- Defined the SOPs and algorithms for screening and testing all people entering the country through international airports in Guyana. Conducted site visits to selected POEs to provide on-the-job training for screening of travelers.
- Provided critical equipment to selected POEs.



### National Laboratories

- Provided critical lab supplies and training in theoretical aspects of molecular diagnostics. Expanded testing capacities by training an additional 50 medical technologists and medical personnel on the use of RDTs.
- Provided trouble-shooting support for testing procedures and sample collection.
- Helped to develop costed list of supplies for diagnostic support.
- Supported the expansion of the laboratory testing capacity in the hinterland regions.
- Procured test kits and PPE for surge in the hinterland regions.



## Infection prevention and control

- Provided training to improve IPC standards in isolation units at hospitals managing COVID-19 patients.
- Estimated the demand and cost of PPE required at all levels of care.
- Conducted the Hospital Readiness Assessment.
- Visited five hospitals with isolation capacity and provided guidance on IPC measures.
- Assessed the capacity of human resources to provide intensive care services in 10 administrative regions.
- Provided guidance to the MOH on the preparation of the national public health plan for COVID-19.
- Briefed the President on COVID-19 trends and the continuation of social distancing measures.
- Reviewed national guidelines for cleaning, sterilization, and disinfection.



## Case Management

- Supported the MOH to estimate COVID-19 cases using modeling tools; helped create a modeling team to undertake this function.
- Supported the MOH to estimate the expected demand for hospital care and determined additional ICU and intermediate care needs; costed all additional resources needed at the country's new COVID-19 hospital.
- Supported the government to prepare the first national COVID-19 Clinical Guidelines and algorithms to manage patients at three levels of care (primary, secondary, tertiary).
- Implemented a regional survey on the impact of the COVID-19 response in general health services, using data from the four largest hospitals in the country and 33 health centers and all national health programs.
- Defined the SOPs and algorithms for the screening, testing and clinical referral for all prisons and centers of detention in Guyana.
- Implemented a regional survey on the impact of COVID-19 response on the supply chain of medicines, identifying gaps and stockouts of essential medicines at all levels of care.
- Supported the drafting of the new National Health Strategy for 2030 and included, for the first time, the strengthening of emergency response as a strategic goal.
- Conducted a review of clinical characteristics, patient profiles, and clinical outcomes of all patients admitted at the of ICU of the COVID-19 main referral hospital.
- Carried out training on death certification and ICD coding for medical doctors.
- Held train on clinical management and intensive care treatment for 45 doctors at all levels of care.



## Operational Support and Logistics

- Conducted an assessment of procurement processes; modeling of needs; and the coordination of donations.
- Provided the country with additional PPE and COVID-19 test kits.
- Assisted with the coordination of supplies/needs through global procurement mechanisms.



## Maintaining essential health services during an outbreak

- Trained national authorities on key aspects of building national EMT capacity and in techniques to estimate needs, and how to expand services.
- Supported the design and adoption of a telemedicine initiative for access to maternal/child services.
- Provided input into the design and adoption of mental health and psychosocial support (MHPSS) for affected populations and health workers.
- Commenced or continued the implementation of priority activities in a MHPSS:
  - Developed a MHPSS response plan; resources for sustained implementation are being mobilized, in collaboration with UNDP'S Information, Education and Communication campaign.
  - Capacity building activities for MHPSS are ongoing for health care providers, students of the Master's in Psychology program at the University of Guyana, COVID-19 hotline operators and frontline health workers.
  - Established of a multi-stakeholder Technical Working Group for MHPSS.
  - The Safe Space 24/7 MHPSS hotline was created as a referral mechanism for individuals who require first-line and long-term mental health and psychosocial support.



## Preparing for the vaccine rollout

- Collaborated with the national task force at biweekly meetings to discuss the introduction of COVID-19 vaccines.
- Completed National Vaccine Deployment Plan and Road Map for introduction of COVID-19 vaccines. Target groups were identified: frontline health workers, persons with comorbidities and those over 65 years of age.
- National cold chain assessment completed for the introduction of the COVID-19 vaccines. Plans are in place for the procurement of additional cold storage equipment.
- Epidemiological training for the first phase of COVID-19 vaccines was completed and will continue as the vaccination campaign rolls out.
- Training for the ESAVI was completed for the health workers.



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

- Supported the National Emergency Response Unit of the Ministry of Public Health and Population (MSPP) to improve coordination between central and departmental levels.
- Supported the MSPP to continue using the crisis cell through 2021 (this was set up the National Multisector Commission for the Management of the COVID-19 Pandemic, which ended its mandate in September 2020).
- Supported crisis cells at departmental level to improve coordination and response to COVID-19 and other crises, notably during the hurricane season.



### Risk communication and community engagement

- Deployed field missions to train 3,013 community health workers in seven of 10 departments in risk communications, preventive measures, contact tracing, and the continuity of essential health services.
- Translated educational materials into Haitian Creole and supported their countrywide distribution.
- Continued supporting the MSPP Communication Unit to enable teleworking.
- Led coordination meetings with the MSPP and other partners to strengthen community response and engagement.
- Supported the Department of Health Promotion and Environmental Protection (DPSPE) and departmental health directorates in the community response to COVID 19 in public markets around the country.
- Planned jointly with DPSPE and Ouest Departmental Directorate, community level support to the displaced population from the Bel Air neighborhood considering the potential risk of contamination from COVID 19 and other diseases.
- Conducted meetings in four departments with community leaders including boards of communal sections, assemblies of communal sections voodoo priests, pastors, and traditional birth attendants.
- Conducted community meetings with young people on COVID-19 risk prevention and reducing its impact on their health (early pregnancies, mental health, and GBV).



### Surveillance, rapid response teams, and case investigation

- Supported the MSPP to develop plans to strengthen COVID-19 surveillance and response at the departmental level, including improving data management and information sharing.
- Supported the MSPP to develop a plan for the detection of COVID-19 cases and to implement a strategic plan to rapidly detect cases at all 68 sampling sites.
- Supported data analysis teams in the country's 10 departments and at central level to improve the information sharing systems currently set up nationally.
- Trained 100 national healthcare workers at specimen collection sites.



### Points of entry, international travel, and transport

- Continued supporting the MSPP to screen incoming passengers at the airport in Port-au-Prince and Cap Haitien, as well as migrants returning to Haiti through the four main points of entry on the border with the Dominican Republic. At Port-au-Prince airport, suspected cases were referred to the MSPP, through a validated protocol.
- Collaborated with partner international agencies IOM, UNFPA, UNICEF and Zanmi Lasanté/Partners in Health to strengthen surveillance at the border with the Dominican Republic, during the two-day binational market.
- Supported the MSPP to keep quarantine centers functioning at the border with the Dominican Republic for observation and investigation of suspected cases, collection of samples, and referral of patients with a confirmed diagnosis.
- Trained field teams to use tablets to complete electronic forms and transfer data.
- Distributed masks for migrants at crossing points and strengthened awareness messages during the two-day binational market (Ouanaminthe/Dajabon).



## National laboratories

- Continued to support the MSPP to strengthen laboratory capacity by providing the necessary reagents and equipment as part of the decentralization process. To date, eight regional laboratories (in addition to the National Laboratory and Gheskio) have the capacity to test for COVID-19 using the GeneXpert system.
- Supported the sampling of COVID-19 suspected cases and transportation of samples to the National Laboratory, using 18 Labo-moto nurses who normally work with the sampling of suspected cases of cholera. Between September and December, these nurses assisted with the testing of 4,697 samples.
- Strengthened laboratory capacities by providing enzymes, internal control primers, PCR tubes, and extraction kits to support early testing and detection of COVID-19 cases. Procured Ag-RDT tests kits for MSPP to support scaling-up of COVID testing.
- Supported the National Laboratory to develop an algorithm using Ag-RDTs to strengthen laboratory capacities at the regional sites and to scale-up testing nationally.
- Provided troubleshooting support for testing procedures and sample collection.



## Infection prevention and control

- Given that all public health institutions from the 10 departments were covered by mid-November 2020, early detection set-up activities were halted. In total, of the 279 health institutions visited, 180 had set up a triage space and 113 also had established an isolation space.
- For the above-mentioned reasons, training of healthcare workers in the appropriate use of PPE (both in COVID-19 case management health institutions and in institutions with triage and isolation capacities) has halted since mid-November 2020. In total, 1,830 staff from health institutions, and ambulance services were trained.



## Case management

- Continued supporting the MSPP to follow up on the number of hospitalized patients, bed occupancy, and gaps and needs.
- Set up a medical call center with 24/7 service to follow-up on suspected and confirmed cases of COVID-19 in home isolation. Between 1 October and 30 November 2020, the call center followed up on 207 COVID-19 patients in home isolation. However, given the downward trend of the epidemic, the MSPP decided to close the call center at the end of November 2020.



## Operational Support and Logistics

- Purchased 150,000 pairs of gloves locally, due to an initial worldwide shortage.
- Distributed PPE kits to five COVID-19 case management health institutions.
- Distributed early detection kits to 123 health institutions with triage and isolation capacities.



## Maintaining essential health services during an outbreak

- Conducted training sessions for healthcare providers working in emergency obstetric and newborn care services to manage pregnant COVID-19 infected patients (prenatal, labor and post-partum, family planning, GBV management) and for neonatal and infant care during the pandemic.
- Conducted training for first responders of the national ambulance service in the management of obstetric emergencies, particularly for the management of post-partum hemorrhage using the Non-Pneumatic Anti-Shock Garment (NASG).
- Provided support to maintain and update the software of the GALILEO machine at the national Blood Safety Program and trained laboratory technicians to ensure continuous availability of secure blood products during health crisis and the pandemic.
- Provided technical guidance to the MSPP to develop a strategic framework document for district health units in the context of COVID-19 using integrated health services delivery networks.



## Preparing for the vaccine rollout

- PAHO supported the government's strategy to introduce the COVID-19 vaccine through the GAVI COVID-19 Vaccines Advance Market Commitment (AMC):
  - Deployed the Vaccine Introduction Readiness Assessment Tool (VIRAT/VRAF WHO/ World Bank) to assess the progress of vaccine rollout readiness.
  - Conducted an initial assessment using the Cold Chain Sizing Tool to assess gaps and needs in cold chain equipment in advance of receiving COVID-19 vaccines. Prepared a request for additional cold chain equipment to fill identified gaps.
  - Supported the national Vaccination Coordination Unit to submit Haiti's application to the COVAX Facility.

## Honduras



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

- Collaborated with authorities to prepare and update the COVID-19 Preparedness and Response Plan.
- Facilitated the visit of a mission of experts on health systems for emergencies and the protection of health workers.
- Helped national authorities to mobilize resources to support the response.
- Supported national health authorities in the planning and adaptation of health services in prioritized areas.
- Fostered coordination between national and international partners and health authorities to support the response.
- Promoted the inclusion of mental health in the country's response to COVID-19, establishing coordination mechanisms on mental health and psychosocial support. Coordinated efforts with the health cluster and United Nations agencies on mental health.



### Risk communication and community engagement

- In collaboration with United Nations agencies and the MOH, developed and implemented a risk communication strategy and plan and a communication plan for the introduction of the vaccine.
- Convened media briefings alongside counterparts; worked with journalists and health facilities; and positioned communication messages and training courses for large audiences using social media networks (Facebook, YouTube, and Twitter).
- Translated risk communication materials on COVID-19 infection prevention and biosafety measures into indigenous languages.
- Financed and developed communication materials for the MOH.



### Surveillance, rapid response teams, and case investigation

- Supported the country to improve strategic planning, using existing epidemiological data, models, and statistical projections.
- Deployed surveillance teams to the most affected departments to support and train rapid response teams (RRTs). Designed a course for RRTs to expand their coverage.
- Worked with authorities to adapt surveillance, laboratory, and case management guidelines and protocols to the country's context. Conducted training, together with GOARN, on the use of Go.Data for contact tracing.

- Provided technical and financial support for integrating COVID-19 surveillance into the SARI/ILI surveillance system, using a single information system (PAHO-Flu). Established situation rooms in each health region, and trained staff at sentinel sites.
- Hired epidemiology consultants to carry out technical cooperation in prioritized networks.



### Points of entry, international travel, and transport

- Worked with multisector authorities to adjust points of entry according to the IHR, providing training, guidelines, equipment, risk communications materials, and PPE.
- Collaborated on the strategy to reopen airports and border points and to maintain surveillance of travelers entering the country.



### National laboratories

- Strengthened laboratory capacity to improve timely detection, case traceability, and contact tracing. Partnered with health authorities to establish three additional virology laboratories in strategic locations, fully equipped, complemented with the donation of supplies for PCR tests.
- Developed a barcode laboratory test registration system, which connects to the national information system, to guarantee the reliability of patient test results.
- Provided training to the virology laboratory on timely RT-PCR testing.
- Provided support and advice for maintaining laboratory equipment through the acquisition of materials and supplies and the repair of existing equipment.



### Infection prevention and control

- Delivered PPE and hygiene supplies to hospitals and health centers.
- Designed courses for health workers on priority topics, in addition to widely disseminating courses that were developed by PAHO and WHO. To date, 25,000 people have been certified through different courses.
- Trained health professionals, NGOs, government officials, and other partners on IPC.
- Distributed more than 90 PAHO and WHO guidelines, protocols, and recommendations for managing the pandemic.



## Case management

- Strengthened infrastructure at priority hospitals and case detection and stabilization centers to respond to the emergency.
- Advised health facilities on treatment of persons with COVID-19.
- Prepared courses for the PAHO Virtual Campus for Public Health and YouTube on home care for confirmed or suspected COVID-19 patients with mild symptoms (145,000 views) and another on the care of pregnant women, those in labor, and the puerperium.
- Through courses available on the PAHO Virtual Campus for Public Health, certified 5,565 people in courses on infection management, occupational health, basic precautions, use of PPE, and more.
- Delivered guidelines, protocols, and updates to the MOH.
- Donated medical instruments and equipment for case management.



## Operational support and logistics

- Analyzed the evolution of the pandemic, on an ongoing basis, and provided recommendations for the best approach.
- Supported modeling efforts to project the impact of the pandemic for planning purposes. Provided planning tools for estimating the number of beds, PPE, equipment, and supplies.
- Supported the MOH in planning, resource mobilization, and costing and procuring supplies and provided financial support to acquire PPE.
- Collaborated in the design of priority projects; helped mobilize resources; and partnered in implementation.
- Contributed to the sustainability of the supply chain by purchasing through the PAHO Strategic Fund and the WHO Procurement Platform.



## Maintaining essential health services during an outbreak

- Advised on maintaining logistical systems and the cold chain for routine vaccination programs and services for maternal and mental health, dengue, and diabetic patients during the pandemic.

- Supported the continuity of the approach to communicable and noncommunicable diseases (prevention of adolescent pregnancy, prevention and surveillance of maternal and infant mortality, safe hospitals, environmental determinants, etc.), and dialysis services nationwide for stage V kidney patients. Developed an asynchronous consultation strategy for the follow-up of patients with chronic diseases.
- Equipped and jumpstarted remote telehealth centers in 22 municipalities in four health regions and six telehealth operations centers in network reference hospitals.
- Helped develop and carry out training on guidelines and protocols for the protection of mental health and psychosocial support.
- Led the project to improve information systems and the framework for monitoring and clinical follow-up of diabetic patients.
- Supported the continuity of essential cancer services, screening, and early detection service; donated thermoablation and ambulatory electrosurgery equipment.
- Promoted dialogue with organizations of persons with disabilities, family associations, and assistance and rehabilitation institutions.



## Preparing for the vaccine rollout

- Advised health authorities on the preparation of the National Plan for the Introduction of the COVID-19 Vaccine.
- Participated in a national integration team for access to and introduction of the COVID-19 vaccine, serving as a link with international entities such as the COVAX Facility.
- Advised health authorities throughout the entire application process to the COVAX Facility, including national legislation processes.
- Advised on the development of technical and operational guidelines for the deployment of vaccines against COVID-19.
- Helped design training for health workers and regional, municipal and local authorities to implement the Plan and developed guidelines for the introduction of the vaccine.



# Jamaica



## Country-level coordination, planning, and monitoring

- Led the United Nations health sector response; worked with Foreign Ministry on health sector efforts with multilateral partners, and foreign missions.
- Collaborated with the national disaster mechanism led by the Prime Minister to provide guidance on health preparedness/response/recovery.
- Procured and distributed laboratory supplies and medical equipment and supplies for 15 isolation areas, plus 15 ICU beds, 50 VHF radios, 50 mobile phones, 13 satellite phones, digital thermometers, hand-held non-contact infrared scanners and 43 tablets to the Ministry of Health and Wellness (MOHW).
- Briefed the MOHW at national and sub-national levels on PAHO modeling exercise using EpiEstim and CovidSIM and on clinical management.
- Collaborated with United Nations staff to develop MEDEVAC guidelines for COVID-19.



## Risk communication and community engagement

- Produced videos on: breastfeeding in the context of COVID-19 and print material for travelers; championing the healthcare worker in support of International Nurses Day; blood donations; and mental well-being/coping with stress during isolation.
- In collaboration with UNICEF, produced infographics tailored to pregnant women and lactating mothers and two videos tailored to seniors.
- Produced a one-pager on tobacco cessation: "COVID is no joke, it gets worse with smoke".
- Undertook a rapid risk assessment of communications needs for vulnerable groups to inform risk communications strategies in advance of the 'now normal' phase.
- Supported the production of weekly 'Ask the Experts' Facebook Live sessions.
- Supported training for journalists on responsible reporting on COVID-19.



## Surveillance, rapid response teams, and case investigation

- Collaborated with MOHW to determine epidemiological transition to community transmission.
- Provided equipment to support field epidemiology/data collection in priority parishes.
- Trained healthcare workers in the WHO surveillance protocol for SARS-CoV-2.
- Trained national and field teams to use Go.Data and provided 25 tablets to expand contact tracing.



## Points of entry, international travel, and transport

- Worked with the MOHW to reinforce training on IHR compliance for health officials, airports/ seaports, immigration, customs and the Jamaica Defence Force.
- Collaborated with the MOHW to provide technical guidance on appropriate procedures at points of entry for the phased reopening of borders to international travelers and on designating appropriate areas for screening, quarantine and isolation.
- Co-hosted, with the MOHW, four meetings of the IHR Stakeholders Advisory Group, with representatives of all ministries, departments and agencies, the airports and ports authorities and Jamaica Defence Force on their roles within the IHR in the context of COVID-19.



## National laboratories

- Provided technical advice and material to MOHW to update COVID-19 testing strategy and to national authorities to review the National Influenza Center's testing protocols.
- Strengthened laboratory capacities by providing enzymes, internal control primers, PCR tubes, and extraction kits to support early testing and detection.
- Strengthened laboratory capacities through training in theoretical aspects of molecular diagnostics and troubleshooting support for testing procedures and sample collection.



## Infection prevention and control

- With UNAIDS, trained members of 11 civil society organizations working in HIV/AIDS in IPC measures.
- Revised the National Strategy for Infection Control to cover COVID-19 response.
- Provided recommendations for use of non-traditional facilities as treatment centers.



## Case management

- Collaborated with MOHW to train 180 managers and staff of 14 infirmaries, including on stressors faced by older people and self-care.
- Facilitated the completion and submission of the MOHW EMT National Response Matrix.
- Provided technical advice to national counterparts to identify potential isolation facilities and on the establishment of Alternative Medical Care Sites (AMCS).
- Remained embedded in the MOHW EOC, supporting the updating of standards for quarantine and isolation facilities.
- Provided guidance/support in nutritional management/breastfeeding during COVID-19.
- Developed guidelines aimed at keeping businesses/offices safe for returning workers.
- Provided technology and communications equipment to assist with operations and logistics.



## Maintaining essential health services during an outbreak

- Completed an assessment of mental health and life skills services that are provided to school-based adolescents by United Nations agencies and other NGOs. Supported school-based adolescents with train-the-trainers' sessions for 46 persons. Provided access to training in psychological first aid for community wealth workers through PAHO's Virtual Campus for Public Health.

- Provided support to working groups on sickle cell disease and childhood cancers.
- Provided technical analysis/advice on the reorganization of health services.
- Worked with MOHW and the regulatory agency to share crisis management guidance.
- Supported the acquisition of antiretrovirals (ARVs) for maintenance of HIV treatment.
- Supported the development and implementation of the COVID-19 Research Agenda.
- Supported the upgrade of the information infrastructure in 110 health facilities.



## Preparing for the vaccine rollout

- Facilitated involvement of Jamaica in the COVAX Facility through special national briefings.
- Facilitated the preparation of the Vaccine Introduction Readiness Assessment Tool (VIRAT), including planning and budgeting.
- Provided training for national immunization staff on vaccine efficacy, safety, logistics, cold chain strengthening, waste management, vaccine surveillance, management and set up of the immunization stations, and ESAVI.
- Provided FAQs and other communication resources in support of the national demand planning and prioritization of target groups.
- Facilitated the procurement of additional cold chain storage equipment (freezers, fridges and other supplies).
- Facilitated negotiations on price and quantities of vaccines to be made available through the COVAX Facility.



## Panama



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

- Activated a PAHO/Ministry of Health joint situation room; supported national authorities in developing and implementing the national COVID-19 response plan.
- Adapted protocols on surveillance, laboratories, case management, and risk communication to the national context.
- Collaborated with national authorities to assess the effectiveness of public health measures being implemented, while the government considers how to gradually resume activities in different sectors.



### Risk communication and community engagement

- Supported the development of the risk communication management plan and the national strategy for preparedness and response to COVID-19.
- Created an information portal with COVID-19 guidelines for the general public and health workers.
- Collaborated with the MOH and the office of the Presidency to develop, adapt and disseminate COVID-19-related communication materials in Spanish and indigenous languages.
- Trained health promoters in risk communication and maintained close coordination with the Ministry of Indigenous Affairs to reach the Guna-yala and Ngäbe-Buglé populations and with IOM and UNHCR to include migrants.
- Promoted dialogue and knowledge sharing on aspects related to treatments, medicines, clinical trials and vaccine development to respond to the emergency by COVID-19.
- Collaborated with the United Nations Information Center on a national campaign to promote prevention measures.



### Surveillance, rapid response teams, and case investigation

- Trained epidemiology staff in COVID-19 surveillance and analysis.
- Supported the MOH to build a COVID-19 database and assisted in data analysis, focusing on the detection of imported cases.
- Contributed to the weekly preparation of progress reports on the pandemic, an analytical document that has been critical to the decision-making process of local and national authorities.



### Points of entry, international travel, and transportation

- Worked with health authorities, entry point officials and the IHR focal point to establish systems to improve surveillance of possible cases; distributed PPE and other supplies to these frontline workers.



### National laboratories

- Provided training and delivered supplies to the network of eleven laboratories to perform molecular analysis detection of SARS-CoV-2, essential for contact tracing and investigating outbreaks.
- Supported the country to formulate a strategy to expand testing countrywide.
- Donated 26,000 sample collection kits using nasopharyngeal swabs to the Gorgas Memorial Institute for Health Studies (ICGES).



### Infection prevention and control

- Provided generators and other equipment to establish field hospitals that can perform triage on patients from Panama's public hospitals.
- Made recommendations to mitigate the number of new infections as restrictions are gradually lifted.
- Sensitized security authorities and staff assigned to reception centers and migrant shelters on the prevention and control of COVID-19.



### Case management

- Analyzed the capacity of the health system; provided guidelines to help Panama reorganize and expand its health services; and created an information board to track health system indicators and the availability of ICU beds.
- Trained 17 MOH participants to use PAHO's tool to plan for the progressive expansion of hospital capacity.
- Strengthened the Operations Centre for Community Control and Tracing of COVID-19: organized a training course and helped implement guidelines for the gradual return to normal, aimed at health promoters and local volunteers.
- Coordinated the donation of 70 oxygen concentrators and PPE for the management of patients with COVID-19.



### Operational support and logistics

- Worked with health authorities to manage donations to a field hospital that serves and houses the general population and migrants.
- Coordinated, on behalf of national authorities, logistics related to reception and distribution of donations of PPE.
- Supported the purchase of PPE through the WHO Purchasing Platform.
- Advised the MOH on defining actions to include support for Panama's health sector in the World Bank budget.



### Maintaining essential health services during an outbreak

- Supported the Ministry of Health in developing strategies to ensure continuity of essential health services and key programs (immunization, malaria, tuberculosis, dengue and others) during the pandemic; designed mechanisms for health authorities and pharmacies to track chronic patients and deliver medicines.

- Supported the formulation of a plan for the mental health care of migrants and made recommendations on psychosocial support to volunteers working in the COVID-19 response; analyzed the availability of human resources for mental health.
- Collaborated on monitoring of essential medicines for ICU treatment of COVID-19 patients; revised the list of COVID-19 medicines in compliance with MOH treatment guidelines, and piloted the drug stock management system, a PAHO/WHO platform for monitoring the levels of stocks of medicines vital to ICU.



### Preparing for the vaccine rollout

- Supported the country's application to the COVAX Facility to gain access to COVID-19 vaccines.



# Paraguay



## Country-level coordination, planning, and monitoring

- Collaborated with the Ministry of Public Health and Social Welfare (MOH) to develop and implement the national COVID-19 response plan; establish the national emergency operations center; and adapt PAHO/WHO protocols and methodologies to the country context.
- Collaborated with the emergency operations team to activate and guide emergency operations centers (EOCs) at the department level.
- Strengthened the MOH to improve access to health services for people with disabilities.



## Risk communication and community engagement

- Provided support to the Ministry of Information and Communication Technologies to disseminate risk communication materials in Guaraní and Spanish.
- Trained 50 health communicators and 40 journalists in risk communication related to COVID-19.



## Surveillance, rapid response teams, and case investigation

- Collaborated with national authorities to establish COVID-19 surveillance systems in shelters for migrant workers returning from abroad.
- Provided guidance for the establishment of a call center for individuals who may have contracted COVID-19.
- Supported the analysis and screening of cases in the national situation room and the health EOC.



## Points of entry, international travel, and transportation

- Prepared communication materials for travelers and citizens returning to the country through land and air entry points.



## National laboratories

- Provided training and guidance to the MOH to conduct PCR testing for COVID-19. Delivered supplies for PCR diagnostic tests and assessed capacity building needs.

- Worked in collaboration with the Central Public Health Laboratory and other national agencies to build capacity to test for COVID-19 within the veterinary reference laboratory, in accordance with PAHO protocols and guidelines.
- Provided ongoing support to update the country's COVID-19 diagnostic strategy, using RT-PCR testing and other methods.



## Infection prevention and control

- Trained health workers to reduce infections in people with disabilities.
- Distributed PPE and provided training in infection prevention and control to health workers; for Ministry of Justice personnel in relation to long-term care facilities; and for Ministry of Labor, Employment and Social Security in relation to work spaces.
- Provided support to adapt hotels and similar spaces for isolation and patient care.



## Case management

- Contributed to the training of more than 8,000 health workers to reorganize and expand health services (case management, safe handling of cadavers, etc.).
- Provided PAHO and WHO clinical management guidelines for adult and pediatric cases, both mild and critical.
- Provided guidance to the network of more than 808 Family Health Units on maintaining essential primary health care services and the management of mild cases of COVID-19.
- Helped reorient the flow of patients and health personnel within the network of services to improve safe case management.
- Assessed needs to expand Paraguay's health services to manage COVID-19 cases.
- Facilitated processes to integrate public sector services (MOH and the Social Security Institute) in order to respond effectively and efficiently to the increased demand for COVID-19 services.
- Supported national authorities to adapt military facilities, hotels and other establishments on the country's borders and use them as alternative medical care sites.
- Supported the adoption of preventive measures in vulnerable groups, such as indigenous peoples, older people, and those who are incarcerated.



### Operational support and logistics

- Supported the planning, coordination, and logistics management of critical supplies, drugs, and equipment.
- Ensured that donors and partners within the United Nations system adhered to the COVID-19 donation procedures of the MOH.



### Maintaining essential health services during an outbreak

- Carried out communication campaigns on non-communicable diseases, mental health, violence, and COVID-19.
- Provided technical cooperation to maintain all activities related to communicable diseases (HIV infection, tuberculosis, neglected infectious diseases and antimicrobial resistance).
- Collaborated with the MOH to implement protocols and guidelines to maintain essential services (maternal, child and adolescent health, vaccination, etc.).
- Helped strengthen mental health services in the context of COVID-19 and reform the current mental health system in the country.



### Preparing for the vaccine rollout

- Supported the country's application to the COVAX Facility to gain access to COVID-19 vaccines.

## Peru



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

- Supported response, coordination, and communication mechanisms at national and subnational health levels, as part of the government's integrated response to the emergency.
- Made recommendations on developing or adapting plans, strategies, and protocols on case management; telemedicine; epidemiological surveillance; IPC; biosecurity, procurement, and more.
- Supported the national Operations Command for COVID-19 to organize health services and define the roles and responsibilities of its multiple institutions and activities.
- Urged consideration of equity, gender, ethnicity and human rights in the COVID-19 response.
- Collaborated with the regional governments of Loreto, Ucayali, Ancash, Tumbes, and Piura on the reopening of primary care services, rapid response teams, appropriate use of PPE, and services for refugees and migrants; designed a COVID-19 plan for health facilities on the borders with Brazil and Colombia to provide care for indigenous populations.
- Together with the private sector, carried out a plan with the regional government of Ancash and WFP to contain COVID-19 transmission at the primary level of care.



### Risk communication and community engagement

- Collaborated on implementation of the MOH and the Council of Ministers' risk communication plans in 13 regions in Peru. Trained 300 journalists and 50 communicators; strengthened 10 risk communication plans.
- Designed, adapted, and distributed information materials for pregnant women, older people, and caregivers on the use of PPE, hand hygiene, environmental health, COVID-19 prevention for the incarcerated, vaccination, risks of self-medication, and care for patients with mild symptoms. An eight-episode radio show was produced, translated, and adapted to Quechua speakers broadcast on six commercial and community radio channels.
- Coordinated the health sector position on COVID-19 through 94 prime-time media interviews, each of which reached an estimated 500,000 homes.
- Supported development of a COVID-19 containment community engagement plan, with an intercultural approach, for three regions: Amazonas, Ancash, and Ucayali; supported its implementation in Ucayali; and strengthened community COVID-19 committees in Amazonas and Ancash in the referral of contacts and diagnostics and treatment.



### Surveillance, rapid response teams, and case investigation

- Strengthened the surveillance system by supporting the updating of regulations and adapting national tools and protocols. Offered guidance on virological surveillance for the detection of SARS CoV-2 variants and alerts, under the IHR.
- Strengthened capacities in epidemiology, laboratories, case detection, monitoring and outbreak control at the national level and in migrant host cities such as La Libertad, Lima, and Tumbes.
- Collaborated on the design of the COVID-19 seroepidemiological survey in Callao and Lima to determine the prevalence by age group.
- Reviewed the strategy for syndromic surveillance of acute respiratory infections and the surveillance of other events indirectly related to COVID-19, including mental health-related events.
- Strengthened health situation rooms in Ancash and Loreto with introduction of diagnostic technologies for epidemiological surveillance and contact tracing, the installation control boards, and telehealth.



### Points of entry, international travel, and transportation

- Collaborated with the CDC-Peru and the National Liaison Center to formulate guidelines and procedures; supported surveillance at points of entry with Brazil and Colombia.
- Supported preparation of a national travel declaration for the gradual lifting of quarantine measures, the regulation of air and sea traffic, and for controls at airports.



### National laboratories

- Designed a plan to assess testing needs, based on hypothetical situations and data modeling; strengthened quality control.
- Strengthened the capacity of the National Institute of Health laboratory and the network of laboratories in 12 regions to process molecular analysis samples. Provided supplies: 1,185,207 molecular reactions, RNA extraction cases and reverse transcription; international acquisition of 122,000 antigenic tests through the Strategic Fund, purchase of ,5000 STANDARD F antigen tests, purchase of 9,957 STANDARD Q antigen tests and 2 analyzers; 1 6B6C-1/HRD conjugate vial, 2 FIRST sets/ ZIRV probes, 50 enzymespair to molecular tests, 40 diphtheria Antitoxin 100 doses,000 IU and 4 positive SARS-CoV-2 controls.
- Collaborated on a biosecurity protocol for taking and transporting biological samples, including a flowchart for the rational use of laboratory materials and a best practices manual for their storage.



## Infection prevention and control

- Helped reactivate the committee on intra-hospital infections; made recommendations on infection prevention and control measures (IPC) for the case management protocol.
- Updated clinical guidelines for patients with COVID-19; regulations for isolation centers and biosecurity; handling of contaminated materials; technical specifications and recommendations on the use and disposal of PPE.
- Collaborated with the MOH and the National School of Public Health to develop a virtual course on IPC. Trained health workers and 4,200 medical students on the clinical diagnosis of the COVID-19 virus, the use and disposal of PPE, and biosecurity measures.
- Donated substantial quantities of PPE to the Ministry of Health: (gowns, biodegradable bags, jackets, C-N95 respirators, shoe covers, gloves, glasses, three-ply surgical masks, N95 respirators, and face shields). These were distributed to national health agencies, the Peruvian Army, and the national prison institute, along with hospitals in five regions of the country.
- Collaborated in the preparation of a pharmacovigilance plan and monitored the use and safety of medicines and medical devices. Adapted regulatory measures to facilitate the availability and donation of technology as well as authorizations for registering health products.
- Implemented WHO's evaluation tool to evaluate IPC in five hospitals in Callao, East Lima, La Libertad, Lambayeque, and Piura.
- Developed a protocol for the management of solid waste from households and hospitals, in the context of COVID-19.
- Strengthened water safety plans and trained 94 water operators in 19 water and sanitation companies and 25 health inspectors in 16 regional health districts. Monitored water, sanitation, and hygiene risk factors in 12 first-level health facilities in Ancash and delivered chlorine-producing equipment and portable laundry facilities; supported health inspections in water, sanitation, solid waste providers and closed community spaces in Ancash.



## Case management

- Supported the reorganization of health care services in five hospitals to improve the care of COVID-19 patients. Provided PAHO /WHO guidelines, flowcharts, and the recommended set of basic services in the context of COVID-19.

- Signed an agreement with the MOH to apply the Unified Emergency and Disaster System (SISMED) in the management of pre-hospital care for COVID-19 patients. Supported case management, calculated gaps and reorganized human resources for ICU care, and developed plans for the continuity of care and outpatient services.
- Supported amending national standards set forth in the Rural and Urban Health Service Act (SERUMS) to allow professionals who studied abroad to become part of efforts to fight COVID-19.
- Strengthened primary health of care; donated biomedical equipment to health facilities; collaborated in a review of protocols for the prevention, diagnosis and treatment of COVID-19 in pregnant women and newborns, and organized a local network to support older people and people with disabilities.
- Supported COVID-19 prevention and control policies in prisons, distributed PPE, and provided training in youth centers.
- Collaborated on a mental health plan in the context of COVID-19, which includes the assessment of the impact of quarantine on the mental health of the population.



## Operational support and logistics

- Helped monitor the supply chain for pharmaceuticals, medical devices, and other supplies. Coordinated with WHO's global platform, in line with the national demand for supplies. Estimated needs for essential COVID-19 and non-COVID-19 goods and monitored their availability and use.
- Contributed to storage strategies and the search for domestic and international suppliers of products with limited availability, including orphan drugs, using PAHO/WHO strategies (leprosy, Chagas disease, and others).
- Supported CENARES in the purchase vaccines through PAHO's Revolving Fund and medicines, medical devices and diagnostic supplies through PAHO's Strategic Fund.



## Maintaining essential health services during an outbreak

- Prepared a guide for COVID-19 home visits to support the recovery of essential services in Amazonas, Ancash, and Ucayali regions.
- Supported the rapid assessment of noncommunicable disease (NCDs) services. Trained primary healthcare workers to manage and monitor patients with cardiovascular diseases and diabetes using telemedicine.

- Monitored and supported activation of the response at the primary care level for priority communicable diseases in Loreto and services for women of childbearing and, pregnant women and newborns. Evaluated services in Ancash, Ucayali, and Amazonas and made recommendations to improve the maternal-neonatal services network.
- Analyzed care being provided by caregivers of older adults; developed an online course and provided (medical history forms and mental health exercises).



### Preparing for the vaccine rollout

- Kept the MOH and other stakeholders abreast of progress in vaccine development and access mechanisms such as the COVAX Facility and the PAHO Revolving Fund.
- Supported adapting the National Vaccination Plan to the context of COVID-19; proposed content based on PAHO's guidelines to plan for the introduction of the COVID-19 vaccine.
- Supported national multisectoral efforts and coordination within the MOH and other agencies regarding the introduction of the vaccine (vaccines, immunization, INE, DIGIESP, DIGEMID, CENARES).



## Mexico



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

- Collaborated with the country's emergency operations centers, United Nations and multilateral partners, and foreign missions to coordinate health sector efforts to combat COVID-19.
- Developed recommendations to adapt PAHO and WHO response protocols for COVID-19 and the rational use of drugs and other related compounds.
- Made progress in defining and implementing response plans at the state level for prevention, mitigation, and care for COVID-19 and at the community level, with a primary health care (PHC) approach. In this framework:
  - Supported the HEARTS initiative to protect people with risk factors from contracting severe forms of COVID-19.
  - In Guerrero, collaborated on prevention and mitigation of maternal and neonatal mortality in pregnancies complicated by COVID-19.
- Collaborated on the mhGAP program and suicide prevention at the national level as part of the COVID-19 mental health response.
- Created a working group with national and international representatives to improve interventions to prevent, detect, and manage COVID-19 in migrants, asylum seekers, and forced returnees in border towns and land entry points.
- Supported the Senate Health Commission to organize two forums to exchange experiences on the health systems' response to COVID-19 among Latin American countries.



### Risk communication and community engagement

- Improved country office media efforts to combat misinformation on COVID-19.
- Partnered with UNHCR, IOM, UNICEF, and the ICRC to ensure a coordinated approach to communicating risk to migrants, asylum seekers, and forced returnees. Capacities were also strengthened for the use of PPE.
- Supported the creation of the national laboratory for risk communication in the General Directorate of Health Promotion. Installed risk communication laboratories in federal entities.
- Scaled up the weekly analysis of risk perceptions analysis to support preparation of strategic reports for decision-making in the health sector.

- Designed and applied strategies to manage public perceptions about the vaccine and vaccination, and communications to improve public adherence to preventive measures.
- Collaborated with the National Institute of Indigenous Peoples to develop and disseminate radio COVID-19 prevention messages in 68 indigenous languages, reaching an estimated 16 million people.
- Positioned the environmental aspects of health in the context of COVID-19, in collaboration with UNEP, SEMARNAT, and state governments.
- Created a dialogue with the government of Mexico City to promote an agenda on urban governance that advances the right to health.
- Presented recommendations to improve pharmacovigilance and risk communication on the rational use of drugs in the management of COVID-19.



### Surveillance, rapid response teams, and case investigation

- Implemented and hosted the Go.data platform for outbreak investigation and training; trained 37 professionals from 10 states in the advanced course.
- Supported the Sub-Secretariat for Prevention and Health Promotion in its daily evening briefings.
- Supported the revision of the Influenza Surveillance System (SISVEFLU) to incorporate COVID-19 into the Respiratory Diseases Surveillance System (SISVER).
- Contributed to updating guidelines for epidemiological and laboratory surveillance of viral respiratory disease with a new operational definition, to expand the diagnosis of suspected cases.
- Hired five epidemiologists to help build the following capacities: implementation of the FLUID platform; implementation of the Go.data platform; analysis of the information generated by the agrarian nuclei; identification of deaths and risk monitoring by the states.
- Helped implement the tool to measure excess mortality from all causes during the pandemic (326,610 excess deaths in 2020).
- Participated in the analysis of maternal mortality, and guidance on maternal death audits.
- Provided training on completing death certificates for those who died from or with COVID-19.
- Prepared terms of reference for the implementation of state emergency health centers.



### Points of entry, international travel, and transport

- Coordinated with the MOH, IOM, UNHCR, and ICRC to design infection prevention measures to detect possible cases among returnees arriving at entry points.
- Prepared and disseminated a video on the resumption of non-essential international travel, with an emphasis on the recovery of the tourism sector.
- Reaffirmed institutional positions on non-interference in international trade and traffic within the framework of IHR and the promotion of preventive measures at points of entry.



### National laboratories

- Provided guidance to the national laboratory to update guidelines and build capacities.
- Provided tailored training and troubleshooting on COVID-19 molecular detection testing.
- Donated the equivalent of 750,000 laboratory test kits, extraction kits, enzymes, internal controls, and other supplies.
- Donated 290,000 rapid detection tests for SARS-CoV-2 antigens, which are being applied in 32 states as part of a national evaluation for the implementation of Ag-RDTs nationwide.
- Consolidated the sequencing capacity of circulating SARS-CoV-2 strains to improve timely detection of variants of public health concern by hiring a specialized professional at the national laboratory and purchasing essential supplies.



### Infection prevention and control

- Provided training on the use of PPE.



### Case management

- Helped draft a PHC-based strategy for the first level of care to identify warning signs of suspected cases of COVID-19 and maintain control of at-risk persons.
- Provided support to review and develop guidelines to improve clinical management of COVID-19 patients, including the review and dissemination of evidence on the use of pharmacological regimens.
- Contributed to drafting and implementing a strategy for the rotation of clinical personnel (doctors and specialized nurses) in a bid to strengthen clinical capacities, given the strain on health services.
- Strengthened capacities for protecting mental health, including measures to prevent suicide.

- Provided guidance on preparing healthcare facilities to treat people infected with COVID-19.
- Provided training on the diagnosis and clinical management of COVID-19 to health personnel, shelter officials, and United Nations staff.



### Operational support and logistics

- Provided technical recommendations on the selection of equipment and medical devices for COVID-19 care.
- Trained health authorities in estimating PPE needs.



### Maintaining essential health services during an outbreak

- Supported essential health services for persons with chronic diseases and coordinated the use of telemedicine with state authorities and other entities.
- Provided intersectoral support to address risk factors for NCDs in the context of COVID-19.
- Promoted measures to protect people in conditions of vulnerability, including a National Commission to Care for Vulnerable Populations in Emergency Conditions.
- Supported the drafting of a national guide for COVID-19, targeting pregnant women and newborns, and provided recommendations to health professionals at the state level. Shared the SIP-COVID tool and provided training.
- Addressed health issues related to migrants, asylum-seekers, and persons returning from abroad (in coordination with United Nations agencies and NGOs).
- Supported the reformulation of actions for the continuity of essential services related to infectious diseases during the pandemic.
- Provided support to ensure the activities of the expanded immunization program during the pandemic and ensure vaccination coverage.



### Preparing for the vaccine rollout

- Participated in the generation of a national COVID-19 vaccination deployment plan, distributed guides and training material for its development, and hired four consultants to prepare the vaccination deployment plan.
- Participated in the national technical advisory group on vaccines.
- Supported the country to prepare for the procurement of vaccines through the COVAX Facility.

# Nicaragua



## Country-level coordination, planning, and monitoring

- Prepared a technical cooperation proposal to contain COVID-19 and its impact on health services in Nicaragua (signed in September 2020) and supported the negotiation process for two projects that have enabled the procurement of critical materials and supplies for the country's COVID-19 response.



## Risk communication and community engagement

- Designed communication materials to prevent COVID-19.
- Supported the Healthy Markets project with the purchase of billboards, signs, and communication equipment.



## Surveillance, rapid response teams, and case investigation

- Worked with national authorities to comply with the IHR standards in the delivery of COVID-19 surveillance data.
- Revised the guide for monitoring COVID-19 transmission and trends.
- Donated computer equipment to strengthen the situation and health statistics rooms.
- Provided technical cooperation to improve recording of COVID-19 mortality and excess mortality, and on the use of the CovidSIM platform.



## Points of entry, international travel, and transport

- Revised guidelines for the entry of transport carriers, companions, and personnel at the official land border points.



## National laboratories

- Revised the laboratory biosafety guide related to COVID-19.



## Infection prevention and control

- Donated PPE for the MOH expanded immunization program.
- Revised guidelines for the management of dead bodies in the context of COVID-19; transfer of patients by ambulance; prevention of COVID-19 transmission in commercial food establishments; safety of the construction workers in health facilities; and prevention in pharmacies in the context of COVID-19.
- Purchased 9,250 respirators.



## Case management

- Donated computer equipment to hospitals.
- Donated basic medical supplies, PPE, and hospital equipment.



## Operational support and logistics

- Donated PPE to the Benemerito Fire Department and the Nicaraguan Red Cross.



## Maintaining essential health services during an outbreak

- Donated motorcycle backpacks to the efforts to control the Aedes aegypti mosquito during the pandemic.



## Preparing for the vaccine rollout

- Supported implementation the National Pharmacovigilance System.
- Provided input into the development of the national plan for the deployment of COVID-19 vaccines.
- Helped analyze the country's cold chain capacity.
- Collaborated in the development of a work plan to analyze and close gaps related to the effective deployment of vaccines.



## Puerto Rico



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

- Participated in virtual meetings, coordinated by PAHO, in which the team conveyed and presented information and materials received from the Department of Health.
- Maintained active communication with national authorities to provide up-to-date information to guide the planning and implementation of public health strategies.



### Risk communication and community engagement

- Collaborated with the Department of Health, Office of Public Health Response, Preparedness, and Coordination, to disseminate COVID-19 information to health staff and the public.
- Distributed information and risk communication material to support the Department of Health's geriatric program and answered questions as they were received.
- Participated in PAHO's virtual training on response to mental health challenges and issues, which was used to organize social support and community outreach actions.



### Case management

- Distributed, in digital format, COVID-19 prevention and case management materials to hospitals, which were then distributed to Department of Health programs to guide in developing strategies and planning services.



### Preparing for the vaccine rollout

- Participated in virtual weekly information sessions, convened by WHO, on the COVID-19 situation and shared updated information on vaccines and other issues with the Department of Health.
- Participated in virtual meetings, organized by PAHO, to guide COVID-19 actions and plan for the introduction of vaccines; shared this information with the Department of Health.



## Saint Kitts and Nevis



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

- Conducted a webinar on health emergencies and disaster risk management in the context of COVID-19.
- Held consultations with national health authorities on the development of country strategic preparedness and response plans, according to WHO guidelines.
- Continued publication of the Country Office COVID-19 information bulletin, including measures taken by countries to contain the spread of the virus and highlights of PAHO support to Member States.
- Coordinated with the UNRC system on COVID-19 initiatives.



### Risk Communications and Community Engagement

- Conducted risk communication training and reviewed messaging for COVID-19. Produced 500 posters on different aspects of COVID-19, including IPC and handwashing, and 800 parenting booklets.
- Provided support to develop the country's Risk Communication Plan.
- Convened a virtual PAHO COVID-19 presentation and update for journalists and media professionals from Saint Kitts and Nevis.
- Conducted psychological first aid training for COVID-19 hotline volunteers and community leaders to support individual and community resilience.
- Conducted a visit to and educational session for the country's prison population and prison staff.
- Carried out a three-month gender and violence awareness campaign in the context of COVID-19.
- Developed and disseminated social media cards on the prevention of diseases; mental health risk factors; healthy eating; how to provide mental health and psychosocial support; and prevent stigma during the COVID-19 pandemic.
- Produced a video highlighting the contributions and issues faced by HCWs in the COVID-19 response; provided technical assistance to develop a short video targeting caregivers, children, adolescents, and the general population to promote confidence in the EPI program.

- Produced a teenage pregnancy awareness video in the framework of the Teenage Pregnancy Week and Youth International Day. These activities strengthened intersectoral collaboration between the MOH and the Ministry of Youth.
- Convened a Youth Impact Award Ceremony to celebrate young people's resilience, talents, skills, and creativity; fifteen young people were awarded.



### Surveillance, rapid response teams, and case investigation

- Procured a vehicle to support contact tracing activities in Nevis and contracted two workers to conduct contact tracing and surveillance.
- Delivered a webinar to share methods for the mathematical modeling of COVID-19.
- Provided orientation of national epidemiologists and laboratory personnel on the PAHO regional program for influenza laboratory-based surveillance for SARI/ILI and its link to COVID-19.
- Collected weekly data on COVID-19 trends and contact tracing; contracted two surveillance officers to support these efforts.
- Trained medical doctors and other health professionals on WHO guidelines for ICD-10 coding of COVID-19 mortality.



### Points of entry, international travel, and transport

- Provided banners to raise awareness about COVID-19 at ports of entry.
- Reviewed, as necessary, entry protocols for the reopening of borders and provided feedback to national health authorities as appropriate.
- Provided necessary equipment, e.g., thermal imagers and IT tools for data collection to strengthen case detection at points of entry.
- Hosted a webinar on "Considerations for resuming non-essential travel in the Caribbean."



### National laboratories

- Procured laboratory supplies for COVID-19 testing.
- Conducted a webinar on scaling up laboratory testing in the Caribbean.
- Facilitated training on molecular testing to establish on-island testing capacity. Strengthened laboratory diagnostic capacity for molecular testing through the procurement of 120 GeneXpert cartridges.
- Disseminated updates on COVID-19 diagnostics, including recommendations for use of rapid antigen tests.



### Infection prevention and control (IPC)

- Trained staff (hospital and clinics) in the donning and doffing of PPE.
- Assessed the country's IPC system.
- Procured and disseminated 397 PPE kits to reduce the risk of infection for health workers.
- Convened a webinar on protecting healthcare workers in COVID-19.
- Provided training in IPC for 100 frontline workers at points of entry and 180 workers in the hospitality industry.



### Case management

- Convened a seminar on managing the flow of healthcare workers exposed to COVID-19 in health facilities. Produced and distributed a mobile booklet for healthcare workers.
- Convened a seminar on WHO's Mental Health Gap Action Program's Humanitarian Intervention Guide (mhGap-HIG), focusing on general care and acute stress among healthcare workers.
- Convened a webinar on the response to dengue during the pandemic. The webinar targeted policymakers, health experts, medical and public health practitioners.
- Improved local health system capacity and protected healthcare workers to safely diagnose COVID-19 and deliver healthcare services.
- Procured three patient monitors for surveillance and case management of persons with COVID-19.
- Provided training on clinical management of COVID-19 and procured four ventilators, five vital signs monitors, and five oxygen concentrators to improve management capacity.



### Operational Support and Logistics

- Shared the COVID-19 Supply Management Tool to facilitate logistics for managing supplies, equipment, and medicines received for the national response.



### Maintaining essential health services during an outbreak

- Worked with health authorities to highlight COVID-19 experiences and best practices, e.g., integrating environmental public health into the COVID-19 emergency; continuation of immunization programs and maternal and perinatal response during pandemic; paying attention to dengue.
- Shared the Epidemic Needs Analysis Tool and provided virtual training to health workers.
- Worked with the Ministry of Health to support Family Health Day – Families in the time of COVID-19 in Nevis.
- Supported the establishment of a national MHPSS Coordinating Committee.
- Designed and printed WHO cardiovascular risk charts and body mass index charts to support the risk stratification process for health centers to identify and manage high-risk patients.
- Trained health personnel to implement the online Self-Management for Chronic Disease Program. Provided manuals and tablets to support implementation of the program.
- Conducted a webinar (73 participants) on scaling up the protection, promotion and support to breastfeeding to address concerns of whether mothers with COVID-19 can transmit the SARS-CoV-2 virus to their babies.



### Preparing for the vaccine rollout

- Conducted training sessions on ESAVI and cold chain management.
- Provided technical support for the development of COVID-19 National Vaccination and Deployment Plan, and to support vaccine introduction readiness using the VIRAT.
- Technical guidance was shared and support was provided for the completion of the requirements of the COVAX Facility.



## Saint Lucia



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

- Launched consultations with national health authorities on the development of Saint Lucia's strategic preparedness and response plan, according to WHO guidelines.
- Continued publication of the Country Office COVID-19 information bulletin including measures taken by countries to contain the spread of the virus and highlights of PAHO support to Member States.
- Coordination with the UNRC system on COVID-19 initiatives



### Risk communication and community engagement

- Supported the development of communication and community awareness materials for the public and vulnerable groups, including to better control chronic diseases and reduce the risk of increased severity of symptoms.
- Produced and distributed posters and booklets on COVID-19 preventive public health measures.
- Provided retractable information banners for placement at points of entry and disseminated risk communication information to the public and travelers.
- Created public service announcements (PSAs) on alcohol use and abuse and implications for COVID-19; disseminated a PSA (HEARTS jingle) on promoting a healthy lifestyle for persons with chronic diseases.
- Provided capacity building for healthcare workers on mental health and psychosocial support.
- Procured equipment to allow the Health Promotion Unit to produce and disseminate communications materials.
- Produced video highlighting contributions and issues faced by HCWs in the COVID-19 response.



### Surveillance, rapid response teams, and case investigation

- Disseminated COVID-19 surveillance technical guidance.
- Introduced COVID-19 data collection tools, e.g., Excel line listing, revised reporting form.
- Provided orientation on Go.Data, the WHO contact tracing software for data capturing and monitoring the chain of transmission.
- Provided orientation on EpiEstim and CovidSIM, mathematical models for the generation of effective reproductive rate and short-term forecasting of COVID-19 cases.
- Trained medical doctors and other health professionals on WHO guidelines for ICD-10 coding of COVID-19 mortality.



### Points of entry, international travel, and transport

- Conducted health surveillance training at ports for COVID-19.
- Reviewed entry protocols for the reopening of borders and provided feedback to national health authorities as appropriate.
- Procured necessary equipment and IT tools for data collection at main airports to strengthen infrastructure for case detection at points of entry.
- Convened a webinar on "Considerations for resuming non-essential travel in the Caribbean."



### National laboratories

- Distributed sample collection materials and RT-PCR testing materials for COVID-19 testing.
- Conducted training and hands-on practice in theoretical aspects of molecular diagnostics.
- Ensured laboratory capacity to detect COVID-19 cases with necessary tests and reagents, and to scale up capacity as more cases were detected.
- Convened a webinar on scaling up laboratory testing in the Caribbean.
- Led training on molecular testing to establish on-island testing capacity.
- Disseminated updates on COVID-19 diagnostics, including recommendations for use of Rapid Antigen-based tests (Ag-RDTs) for COVID-19.
- Procured additional GeneXpert cartridges, laboratory test kits and consumables in support of laboratory strengthening for diagnosis of SARS-CoV-2.



## Infection prevention and control

- Conducted training on IPC for healthcare workers.
- Conducted training on the use of PPE.
- Delivered PPE to reduce the risk of COVID-19 infection among healthcare workers.



## Case management

- Improved local health system capacity and provided recommendations for healthcare workers to safely detect and deliver healthcare services.
- Procured 10 infrared and 100 digital contact thermometers, four vital signs monitors, and five oxygen concentrators for surveillance and case management of persons with COVID-19.
- Updated guidelines on maternal and child health and the management of pregnant women and neonates during the pandemic.
- Convened a webinar on dengue response during the COVID-19 pandemic, targeting policymakers, health experts, and medical and public health practitioners.



## Operational support and logistics

- Facilitated the international procurement of laboratory supplies and PPE for shipment to Saint Lucia.



## Maintaining essential health services during an outbreak

- Procured and distributed water testing kits to the MOH.
- Worked with the country's immunization program to ensure the continuation of vaccinations during the pandemic and to create a forum to exchange experiences and challenges in adjusting the delivery of immunization services. Provided training on using WHO/UNICEF's annual Joint Reporting Form (JRF) and the new monthly reporting system for vaccines. PAHO also conducted a virtual campaign to support Vaccination Week in the Americas.

- Provided training on COVID-19 and its impact on children living with disabilities.
- Developed a UNICEF and PAHO Interagency work plan provide the country with guidance and recommendations that will contribute to allowing children to safely return to school ("Safe Back to School").
- Conducted a webinar for youth and adolescents to raise awareness on COVID-19 and familiarize them with the roles they plan in the country's response to the pandemic.
- Provided self-management strategies for patients with chronic disease to reduce the risk of increased severity of symptoms.
- Provided support to establish a national MHPSS Coordinating Committee.
- Conducted situational analysis to determine extent of drug use, characteristics of users and types of drugs used, and treatment needs.
- Helped expand Global HEARTS to improve the management of cardiovascular diseases at the primary care level.
- Provided support to strengthen vector control programs to respond to the dengue outbreak by providing insecticide application equipment, insecticides, PPE, and entomological supplies.



## Preparing for the vaccine rollout

- Conducted training sessions on ESAVI and cold chain management.
- Provided technical support for the development of COVID-19 National Vaccination and Deployment Plan, and to support vaccine introduction readiness using the VIRAT.
- Support was provided for the completion of the requirements of the COVAX Facility.

# Saint Vincent and the Grenadines



## Country-level coordination, planning, and monitoring

- Provided recommendations to national health authorities on the response to COVID-19.
- Procured eight A/C units for the PCR laboratory and the health EOC.
- Launched consultations with national health authorities on the development of strategic preparedness and response plans, according to WHO guidelines. Pre-populated templates were provided as working documents on which to base discussion with national health authorities.
- Continued publication of the Country Office COVID-19 information bulletin, including measures taken to contain the spread of the virus and highlights of PAHO support to the Member States.
- Coordinated with the UNRC system on COVID-19 initiatives.



## Risk communication and community engagement

- Distributed 580 posters on COVID-19. Produced information, education, and communication (IEC) materials in the form of 250 posters for pre and primary school children.
- Conducted training with regional focal points to discuss public health considerations for children with disabilities and to offer guidance for continuation of specialized health services for these children and their families.
- Provided support for the safe reopening of schools, together with UNICEF.
- Convened a virtual dialogue in which more than 1,400 young people participated, aimed at exploring what it will take to adjust to this new way of living and how to cope with pandemic-related isolation. Participated in weekly meetings with the MOH and youth leaders and developed a work plan.
- Convened discussions with country focal points that resulted in agreed interventions to use as a framework to address gender-based violence in the Region.
- Provided health authorities with a printer and scanner to support the preparation and dissemination of communications materials related to substance abuse and COVID-19. Communication equipment was also provided to support the continuity of nutrition services and activities and to scale up communication efforts with vulnerable populations.



## Surveillance, rapid response teams, and case investigation

- Procured equipment for COVID-19 surveillance activities, including four desktop computers.
- Trained medical doctors and other health professionals on WHO guidelines for ICD-10 coding of COVID-19 mortality.



## Points of entry, international travel, and transport

- Supported the production of information banners for points of entry.
- Reviewed, on a regular basis, protocols for the reopening of borders and provided feedback to national health authorities, as appropriate.
- Provided necessary equipment, e.g., IT tools for data collection, to strengthen case detection at points of entry.
- Conducted a webinar on "Considerations for resuming non-essential travel in the Caribbean."



## National laboratories

- Procured materials including enzymes, internal control primers, PCR tubes, and extraction kits; coordinated with the IAEA to donate supplies and equipment.
- Trained laboratory staff from the National Health Laboratory to test for COVID-19 using open platforms for molecular diagnostics. Delivered test kits and critical material to implement the reference protocol. This marks the first time that Saint Vincent and the Grenadines' national laboratory has installed capacities for PCR laboratory testing.
- Strengthened the diagnostic/surveillance capacity of the molecular lab by providing a computer, printer, and related peripherals; installed two split air conditioning systems to support cold chain management of COVID-19 diagnostics.
- Conducted a webinar on scaling up laboratory testing in the Caribbean.
- Led training on molecular testing to establish on-island testing capacity.
- Strengthened laboratory diagnostic capacity for molecular testing through the procurement of 120 GeneXpert cartridges.



## Infection prevention and control

- Conducted training on essential aspects of IPC.
- Reduced human-to-human transmission in health facilities through reorganization of health services.
- Procured 1,000 infrared thermometers and 5,000 face shields to support COVID-19 management in schools.
- Provided handwashing stations, hand sanitizers, and sanitizing stations for eight schools to slow the spread of COVID-19.



## Case management

- Trained responders in the psychosocial aspects of COVID-19, including responders at points of entry and those working in basic needs services, in-patient, and long-term care facilities.
- Supported development of a national plan to address mental health needs.
- Improved local health system capacity and protected healthcare workers to safely diagnose COVID-19; provided recommendations for healthcare services.
- Procured three patient monitors, 10 infrared thermometers, 100 digital contact thermometers, six vital signs monitors, five oxygen concentrators, and two defibrillators for the surveillance and case management of persons with COVID-19.



## Maintaining essential health services during an outbreak

- Procured two water quality testing kits for environmental health.
- Conducted virtual training on the Self-Management for Chronic Disease Program. Provided manuals and tablets to support implementation of the program.

- Designed and printed WHO cardiovascular risk charts and body mass index charts to support the identification and management of high-risk patients.
- Supported strengthening the capacity of the vector control program to respond to the dengue outbreak by providing one vehicle-mounted Ultra Low Volume (ULV) machine; six handheld fogging machines, and insecticides. Produced a video on dengue prevention and control; printed and disseminated dengue clinical management guidelines; and procured two dialysis machines for the management of severe dengue cases.
- Developed a gender-based violence campaign targeting the general public, policymakers, social service providers and survivors and victims.
- Helped develop several activities to engage young people and address their concerns. Developed a virtual youth camp, provided tablets to six youth leaders to facilitate weekly virtual training sessions and discussions. Provided IT equipment for adolescent health.



## Preparing for the vaccine rollout

- Conducted training sessions on ESAVI and cold chain management.
- Provided technical support for the development of COVID-19 National Vaccination and Deployment Plan and to support vaccine introduction readiness using the VIRAT.
- Support was provided to complete the requirements of the COVAX Facility.



## Suriname



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

- Contributed to ongoing discussions with the COVID-19 Outbreak Management Team on strategies to control the spread of the disease and shared technical guidance documents.
- Participated in weekly Incident Management System team meetings to coordinate PAHO's response to the COVID-19 pandemic; prepared and shared weekly situation reports with counterparts, including the MOH, UNCT, and the diplomatic corps.
- Supported the analysis and preparation of graphs and charts to describe the epidemiology of the pandemic in Suriname to help inform the response.



### Risk communication and community engagement

- Developed, produced, and disseminated print material and media messages for radio and television on prevention measures for COVID-19, including the launch and implementation of a campaign to encourage mask wearing, hand washing, and physical distancing. Special sessions were conducted in indigenous and tribal villages and in goldmining camps in the interior.
- Produced several risk communication and awareness materials in Dutch and other local languages to continue raising awareness, including in indigenous, tribal, and migrant populations as well as among pregnant and lactating women.
- Developed and printed a manual on community engagement for risk communication and trained village and community leaders in its use.
- Supported and participated in media sessions (radio, television and social media) on COVID-19 risk prevention measures; NCDs, smoking and COVID-19; and the role of PAHO in supporting the COVID-19 vaccine.
- Provided laptops and a camera to strengthen the communications department of the MOH.



### Surveillance, rapid response teams, and case investigation

- Provided ongoing technical cooperation for strengthening case detection, contact tracing, training of contact tracers and rapid response teams, and epidemiological analysis of COVID-19 cases.
- Supported the development of a country-specific COVID-19 database.

- Trained malaria service delivery workers to identify COVID-19 signs and symptoms; supported surveillance missions for case detection and investigation in the interior of the country.
- Conducted training in event-based surveillance and retraining on SARI/ILI surveillance.



### Points of entry, international travel, and transport

- Provided technical guidance on surveillance among migrant populations at land borders.



### National laboratories

- Provided test kits and other reagents and materials to the central laboratory on an ongoing basis.
- Provided 30,000 antigen-based rapid diagnostic test kits (Ag-RDTs), including readers; trained healthcare workers in their use.
- Supported the pilot study on the use of the antigen-based rapid diagnostic test kits and monitored its performance.
- Provided technical guidance on sample collection for the surveillance of variants of the SARS-CoV-2 virus.



### Infection prevention and control

- Conducted ongoing training of hospital health personnel in IPC measures.
- Trained cleaning staff in hospitals, schools and other government facilities in the principles and methods of cleaning and disinfection for effective IPC.
- Translated the OpenWHO course on environmental cleaning and disinfection into Dutch.
- Assessed IPC measures at care homes for older people to improve staff training; provided PPE and cleaning supplies to at least five of the care homes for older people
- Donated PPE and other supplies to the MOH.



### Case management

- Provided 20 oxygen concentrators, four ventilators, 20 patient monitors, 12 BiPaP machines, and 400 aprons to hospitals to manage cases of COVID-19.
- Trained general practitioners in the triage and management of COVID-19 in the primary care setting and the home environment.
- Translated into Dutch the OpenWHO online courses on long-term care facilities in the context of COVID-19 and occupational health and safety.
- Supported the training of nine nurses in critical care to strengthen the management of severe/critical cases of COVID-19.



### Operational support and logistics

- Provided equipment and online access to the distance education training platform for the School of Nursing.
- Provided access to an online platform for the MOH to virtual meetings.



### Maintaining essential health services during an outbreak

- Provided ongoing guidance on maintaining essential health services; provided promotional materials for strengthening the immunization program; and collaborated with the Ministry of Health to monitor and report on the maintenance of essential health services.
- Collaborated with the Suriname Red Cross to promote safe blood donations and disseminated promotional materials to encourage blood donors.
- Provided technical cooperation for the surveillance, case detection and management of malaria cases in villages in the interior.



### Preparing for the vaccine rollout

- Provided technical cooperation for the development of the National Deployment and Vaccination Plan (NDVP) for COVID-19 vaccines.
- Provided technical guidance on engaging with the COVAX Facility for the procurement of vaccines.
- Provided technical guidance, documentation, and cooperation to the National Drug Regulatory Committee and the National Immunization Technical Advisory Group in preparation for the implementation of the NDVP.



# Trinidad and Tobago



## Country-level coordination, planning, and monitoring

- Made recommendations for reopening schools in the context of COVID-19 through a webinar for ministries of education and health, principals, and teachers in the Caribbean.
- Provided technical support to develop the National Policy on Immunization of Healthcare Workers.
- Updated the MOH Influenza Immunization Preparedness Plan.
- Collaborated with the World Bank and IDB to provide technical support to the MOH.
- Developed an assessment of the economic impact of COVID-19 on the health sector.



## Risk communication and community engagement

- Developed a national COVID-19 risk communication campaign, using traditional and non-traditional media and tailored messages to key audiences.
- Reviewed and helped to implement the MOH communication plan. The communication campaign increased PAHO's visibility as a leader in the COVID-19 response, including a weekly slot on a popular television morning show, where the Organization provides ongoing updates and information.
- Participated in national press conferences with the MOH.
- Undertook community engagement activities via community interviews and solicited feedback on views about COVID-19.
- Supported the MOH to hire a graphic design artist, social media officer, visual communications assistant and website content assistant to improve their risk communication strategy.
- Collaborated with UNDP, UNICEF, and MOH to develop a television series ("Family Vibe"), focusing on families and children, their health, and coping strategies during COVID-19.



## Surveillance, rapid response teams, and case investigation

- Provided technical guidance to enhance the collection and analysis of surveillance data.
- Developed a database on COVID-19 patients for use in evidence-informed decision-making.
- Delivered a presentation on surveillance of respiratory illnesses and interruption of virus transmission through a webinar for epidemiologists, persons working in surveillance, and contact tracers in the Caribbean.



## Points of entry

- Trained and provided PPE to healthcare workers and personnel at points of entry, as well as guidance within the wider UN system in the country to guide PPE procurement.



## National laboratories

- Procured RNA extraction kits, enzymes, internal controls, swabs, N95 masks, oxygen concentrators, and PPE.
- Supported the expansion of the diagnostic network through antigen-based detection tests.
- Trained 50 persons from the MOH and the Regional Health Authorities (RHAs) to upgrade their capacity for PCR testing, as part of an expansion of laboratory testing capacity



## Infection prevention and control

- Supported the development of several IPC guidelines for different settings, including homes for the aged and long-term care facilities, children's homes, residential facilities and dialysis centers.
- Worked with the MOH to develop COVID 19 visiting guidelines for homes for the aged and long-term care facilities.
- Supported the development of the MOH guidelines for quarantine and isolation of COVID-19 persons at home.



## Case management

- Supported capacity building, in collaboration with the UWI, of 50 registered nurses on the core competencies to function in the critical care setting.
- Established a mental health and psychosocial support (MHPSS) coordination mechanism.
- Conducted four webinars related to MHPSS with a range of target groups.
- Supported the development of a MHPSS Directory of Services, a one-stop hub for crisis support.



## Operational support and logistics

- Worked with national counterparts to analyze available stocks of medicines for HIV, TB, and malaria.
- Developed and implemented a plan to address possible stock-outs of medications.
- Collaborated with the MOH to ensure availability of medications through the PAHO Strategic Fund and facilitate loans of medications from other countries.
- Provided technical support for the engagement of the MOH in the COVAX Facility.



## Maintaining essential health services during an outbreak

- Provided guidance on prioritizing care for patients with NCDs amid the pandemic.
- Supported health promotion activities designed for vulnerable settings.
- Continued to support the procurement of vaccines through the PAHO Revolving Fund.
- Provided medical products (electrocardiogram and ultrasound) to an NGO working with the MOH in sexual and reproductive health, with an emphasis on vulnerable populations.
- Hosted a stakeholder consultation with organizations working for disabled people to discuss the impact of the COVID-19 pandemic on the health services. Recommendations are being used to guide the country office communications.
- Supported the completion of a comprehensive occupational and environmental safety and health study (OESH) to determine risks to healthcare workers in the context of COVID-19.
- Hosted a Facebook Live session on breastfeeding and COVID-19 in recognition of World Breastfeeding Day to encourage continued breastfeeding.
- Facilitated the expansion and strengthening of mental health services by developing the national mental health policy plan 2019-2029, with a focus on community mental health services.

- Continued supporting the expansion of the HEARTS initiative, developing a hypertension diary and daily tracker. HEARTS implementing sites have increased from 5 to 35; coverage has grown from 150,000 to more than 500,000 people.
- Hosted a virtual TB mission that produced actionable recommendations.
- Supported the reduction in maternal mortality by expanding the perinatal information system to additional sites in the country.
- Facilitated consultations on vaccine hesitancy among healthcare workers.
- Hosted meetings on the development of a gender-based violence health information system in collaboration with CLAP.
- Recruited a contractor to develop and initiate an electronic immunization record registry.



## Preparing for the vaccine rollout

- Provided technical support to prepare the COVID-19 Vaccine Introduction Readiness Assessment Tool (VIRAT) reports.
- Provided technical support at national COVID-19 Steering Committee meetings and to develop the National Deployment and Vaccine Plan.

# United Kingdom Overseas Territories

Anguilla, Bermuda, British Virgin Islands, Cayman Islands, Montserrat, Turks and Caicos Islands



## Country-level coordination, planning, and monitoring

- Provided technical guidance to national authorities in Bermuda and the Cayman Islands to coordinate health sector activities, conduct needs assessments, and identify priorities.
- Provided Bermuda, Cayman Islands, and Turks and Caicos Islands with technical guidance for documenting public health and social measures for all phases of the response.
- Provided technical advice on operational support for the national EOC in the Turks and Caicos Islands.
- Provided technical guidance to Bermuda and the Cayman Islands on the scope of rapid response teams and community engagement.
- Assisted with reprioritization of the biennium budget and work plan for COVID-19.
- Provided guidance on outbreak response and risk mitigation strategies to the Governor and senior government officials.



## Risk communication and community engagement

- Distributed communication materials (posters, banners, and parenting booklets) in Anguilla, British Virgin Islands, and Montserrat.
- Distributed communication materials to Turks and Caicos Islands on mental health, cyber safety, COVID-19 prevention, prevention of substance abuse and gender-based violence. Also distributed PAHO and WHO corporate risk communication and public education materials.
- Trained community leaders in Anguilla, British Virgin Islands, and Montserrat in psychological first aid.
- Facilitated a series of webinars on mental health and psychosocial support to build individual and community resilience.



## Surveillance, rapid response teams, and case investigation

- Disseminated COVID-19 case definitions and guidelines for laboratory molecular testing in Anguilla, Bermuda, British Virgin Islands, Cayman Islands, Montserrat, and Turks and Caicos Islands.

- Trained national counterparts in Anguilla, Bermuda, and Turks and Caicos Islands to use and manage Go.Data, WHO's contact tracing tool for capturing and monitoring the chain of transmission.
- Oriented national counterparts in Anguilla, British Virgin Islands, and Montserrat on the use of EpiEstim and CovidSIM, mathematical models for short-term forecasting of COVID-19 cases.
- Provided Turks and Caicos Islands with access to PAHO/WHO guidelines on epidemiological surveillance, contact tracing, case isolation and quarantine of contacts for adaptation to the national context.
- Provided technical advice and support for expanding and strengthening contact tracing capacity in Turks and Caicos Islands, including access to an online training course, data management tools, and standard operating procedures.
- Training provided for medical doctors and other health professionals in Anguilla, British Virgin Islands, and Montserrat on WHO guidelines for ICD-10 coding of COVID-19 mortality.
- Disseminated latest updates on COVID-19 diagnostics, including recommendations for the use of rapid antigen tests for COVID-19 in Anguilla, British Virgin Islands, and Montserrat.



## Points of entry, international travel, and transport

- Provided PAHO/WHO guidelines on COVID-19 and travel precautions at points of entry into Bermuda, Cayman Islands, and Turks and Caicos Islands.



## National laboratories

- Strengthened laboratory capacities by providing enzymes, internal control primers, probes, positive controls, extraction kits, and RT-PCR testing materials to support early testing and detection.
- Provided training, guidance, and trouble-shooting support in theoretical aspects of molecular diagnostics and laboratory testing procedures. RT-PCR testing for SARS-CoV-2 was conducted at two laboratories in Bermuda and two in the Cayman Islands.
- Ensured that Turks and Caicos Islands had access to reference laboratories for referral of samples for PCR testing.
- Provided the Turks and Caicos Islands with technical advice for validating test results and external quality assessment samples after Public Health England provided equipment and training of staff to build real-time, in-country PCR capacity.
- Provided GeneXpert cartridges to strengthen molecular diagnostic capacity of laboratories in Anguilla, the British Virgin Islands, and Montserrat.



## Infection prevention and control

- Supported the protection of healthcare workers by providing and distributing PPE.
- Supported the MOH of the Turks and Caicos Islands by offering WHO and PAHO IPC and clinical management guidelines, on-line training resources, and virtual meetings.
- Donated PPE to Turks and Caicos Islands.
- Prepared Anguilla for a 'soft' reopening of borders by providing IPC training for ferry operators, taxi drivers, and hotel housekeeping staff.
- Delivered an online IPC course for 20 healthcare workers.



## Case management

- Assisted the MOH of Turks and Caicos Islands to plan for clinical and hospital surge capacities.
- Supported MOH of Bermuda, Cayman Islands, and Turks and Caicos Islands with access to WHO and PAHO clinical management guidelines, on-line training resources and virtual meetings.



## Maintaining essential health services during an outbreak

- Provided PAHO and WHO guidelines to Turks and Caicos Islands on selecting and maintaining essential health services.
- Guided Bermuda in technical aspects of the procurement of pharmaceuticals for essential health services.
- Trained national counterparts in Anguilla, British Virgin Islands, and Montserrat to monitor the impact of COVID-19 on the national immunization program.
- Continued procurement of vaccines for the immunization program in Turks and Caicos Islands through the PAHO Revolving Fund.
- Oriented Anguilla, British Virgin Islands, Montserrat, and Turks and Caicos Islands on PAHO's recommendations for maintaining immunization programs in the context of COVID-19.



## Preparing for the vaccine rollout

- Provided special briefings for health authorities from Bermuda and Cayman Islands on the COVAX Facility.
- Provided Turks and Caicos Islands with information on the COVAX Facility and its planned role in improving access to and future procurement of COVID-19 vaccines and the relationship of the COVAX Facility to the PAHO Revolving Fund.
- Supported the MOH of Turks and Caicos Islands to develop a national COVID-19 vaccination plan, using the WHO and PAHO guidelines, as well as the communications strategy.
- Hosted a discussion on ultra-cold chain logistics and equipment.
- Supported a workshop for the introduction of COVID-19 vaccines, including cold chain management.
- Provided MOH of Turks and Caicos Islands and relevant stakeholders with updated information on the COVID-19 vaccines available from WHO, PAHO, and other scientific sites.
- Provided training for national immunization staff in Bermuda and the Cayman Islands on vaccine efficacy, safety, logistics, cold chain strengthening, waste management, vaccine surveillance system, and management and set up of immunization stations and of ESAVI.
- Provided FAQs and other communication resources to support national planning for vaccine demand and the prioritization of target groups.



## Uruguay



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

- Supported the MOH Emergency Operations Center.
- Collaborated with the MOH to update Uruguay's national Coronavirus Plan.
- Participated in interdisciplinary advisory groups to provide expert advice on the response to the COVID-19 pandemic.



### Risk communication and community engagement

- Supported the design of informational and multimedia materials appropriate to the national context.
- Disseminated messages of critical importance on health, hygiene, physical distancing, mental health, and other issues to vulnerable groups through a variety of channels, including social media networks.



### Surveillance, rapid response teams, and case investigation

- Trained surveillance staff and provided tools and equipment to strengthen the epidemiological surveillance system to detect cases of COVID-19.
- Supported the provision of essential materials as a contingency reserve.
- In coordination with a national university, trained the epidemiological team participating in a diploma program.
- Strengthened training in information analysis and dissemination.



### Points of entry, international travel, and transportation

- Developed communication materials for travelers arriving at ground and air points of entry.
- Contributed to the launch of mass media campaigns to raise awareness of people arriving from abroad.



### National laboratories

- Facilitated South-South cooperation between the governments of Chile and Uruguay to strengthen SARS-CoV-2 sequencing in Uruguay.
- Purchased and donated materials for COVID-19 testing.



### Infection prevention and control

- Delivered PPE to national authorities for use by emergency health staff.



### Case management

- Supported national health authorities to adopt and implement strategies for the care of patients with COVID-19.



### Operational support and logistics

- Consolidated the resource needs of the health sector and created a contingency reserve of PPE and materials to close critical gaps.
- Collaborated with the MOH to ensure the continuity of Uruguay's vaccination programs and the purchase of vaccines.



### Maintaining essential health services during an outbreak

- Provided up-to-date guidelines and recommendations on maintaining essential health services during the pandemic and strengthening the first level of care.
- Transmitted international best practices.
- Supported the sustainability of key public health programs.



## Venezuela

(Bolivarian Republic of)



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

- Facilitated the signing of an agreement between national entities to protect the health of Venezuelans during the pandemic, focusing on surveillance, diagnostics, access to PPE, decentralization of testing, and prioritization of the most affected states.
- Implemented six projects related to COVID-19 with the following objectives: to serve the needs of the Venezuelan people; save lives; reduce contagion; give priority access to PPE; enable access to diagnostic tests; and strengthen hospitals.
- Worked with the Ministry of Popular Power for Health (MPSS) to strengthen health facilities designated as COVID-response sites in 24 States. Supported five health field offices that were created to carry out priority activities for COVID-19 prevention and control, especially at border crossings.
- Facilitated bilateral coordination meetings between health authorities from Colombia and Venezuela (Bolivarian Republic of) to formulate strategies to protect the health of people living in the border areas.
- Led the Health Action Group and five sub-national groups, convening more than 65 partners (national and international NGOs, representatives of the United Nations system, and donors) to coordinate the health sector's humanitarian response to COVID-19.
- Guided preparation of the health component of the country's humanitarian response plan for 2020. Supported NGOs from the Health Action Group to present COVID-19 projects related to the Plan and in their field work with indigenous communities, oncology patients, and other vulnerable groups.



### Risk communication and community engagement

- Supported the MPSS to disseminate stickers with information on COVID-19 prevention measures and antigen-based rapid diagnostic tests; produced posters on handwashing (Spanish and English) for placement at airports and the correct use of PPE and proper hospital hygiene.
- Partnered with Digitel, a cell phone company, to send 1.5 million SMS messages to the public on COVID-19 prevention and living with quarantine measures.

- Designed communication materials aimed at pregnant women and the community: cards for social networks, posters, and flyers with information on pregnancy, childbirth and breastfeeding during the COVID-19 pandemic.
- Adapted materials with information on alternatives for handwashing, in coordination with UNICEF; prepared an online video with messages about hygiene and infection control in hospitals.
- Organized a conversation with directors and journalists from 17 national media groups to brief them on the prevention campaign #Take it Seriously.
- Produced COVID-19 prevention audio programs at the community level through a campaign "Protect yourself and protect others."



### Surveillance, rapid response teams, and case investigation

- Advised and supported the MPSS to analyze the clinical-epidemiological database of confirmed cases of COVID-19.
- Provided support to establish a national central SIG core to facilitate the monitoring of COVID-19.
- Advised the MPSS on the use of the ICD coding system, updated by WHO, in which COVID-19 has been included as a cause of death.
- Equipped 10 health situation rooms in six border states with technology; provided training and training materials on the principles of epidemiology for disease control; offered technical advice on the analysis of epidemiological information of COVID-19 and other public health events.



### National laboratories

- Provided training, technical support, and supplies for the molecular detection of COVID-19 to the Rafael Rangel National Hygiene Institute, the country's reference laboratory.
- Worked with the MPSS, the Hygiene Institute, and regional governments to decentralize the collection of PCR tests and expand the country's diagnostic capacity.
- Acquired, with national funding, 340,000 antigen tests and 35 test readers.
- Trained laboratory technicians and helped formulate protocols on the use of antigen-based detection tests and equipment deployed to the national diagnostic network, in order to bring diagnostic testing closer to those areas where most needed, particularly those that are difficult to reach and with highly vulnerable populations.



### Infection prevention and control

- Trained health workers in IPC; obtaining samples; isolating patients; and proper use of PPE. Organized a round table with the MPSS and the Venezuelan Society of Infectiology to launch a program and carry out IPC actions and provided training.
- Distributed essential medicines, personal protective equipment, and hygiene kits to hospitals in Caracas and in three states. Distributed more than 82 tons of PPE for healthcare workers working on the frontlines of the pandemic.
- Supported the analysis of technical documents of the Venezuelan Society of Infectiology to implement protocols for the use of PPE and hospital sterilization, as well as the MPSS documents on hospital-acquired infections.
- Standardized PAHO audiovisual materials with the MPSS and the Venezuelan Society of Infectiology to launch a health risk communication campaign in hospitals.



### Case management

- Supported the MPSS committee on therapeutics on case detection and exchange of best practices for the clinical management and treatment of COVID-19.
- Trained health workers in case management, with a focus on therapeutics, and in the expansion and reorganization of health services.
- Carried out a joint assessment with health authorities on the readiness of hospitals to handle COVID-19 cases.
- Collaborated with Direct Relief in delivering life-saving supplies.
- Shared technical expertise on how to address COVID-19 with the academic community in the country context.
- Organized videoconferences on managing cardiovascular issues and diabetes and obesity during the pandemic.



### Operational support and logistics

- Mobilized nearly 160 tons of medicines, diagnostic and laboratory supplies, PPE, medical equipment, medical supplies, and hygiene and communication materials to address the COVID-19 pandemic.
- Strengthened logistical management in the warehouses of 22 hospitals; provided office supplies, computers and printers; and trained 122 staff to use the PAHO LSS/SUMA Logistics Support System, (a tool that, beyond the immediate emergency response, can be used to coordinate logistics on a day-to-day basis, without the need for Internet connectivity).



### Maintaining essential health services during an outbreak

- Facilitated the donation to Venezuela (Bolivarian Republic of) of 6,000 doses of anti-rabies vaccines for emergencies related to this zoonotic disease; coordinated the donation of 600 vials of diphtheria antitoxin for the response to diphtheria outbreaks in Haiti and Peru.
- Trained 99 health and community workers in the Mental Health Gap Action Program (mhGAP) for basic psychosocial support and mental health assistance.
- Deployed nearly 400,000 doses of fast-acting ASPART insulin for insulin-dependent patients in 19 hospitals across the country.
- Improved the response capacity of the emergency services in at least 27 hospitals, providing equipment, supplies and medicines.
- Advanced the Integrated Vector Management Manual; maintained the weekly notification of these diseases through the Health Information Platform for the Americas. Established a national network of clinicians as part of a regional network to train national staff.
- Expanded the coverage of the malaria diagnostic and treatment network in prioritized locations; specific resources were mobilized from the Global Fund for the country's malaria control project, set to start in 2021.
- Submitted the country's report to the Regional Commission for Monitoring and Re-Verification of the Elimination of Measles and Rubella for the Americas to advance the process of re-verifying the elimination of measles.
- Inaugurated a diploma program on women's, perinatal, childhood and adolescent healthcare, with a life course and primary health care approach for 154 registered health workers from the country's 24 states.
- Continued implementation of the master plan to strengthen the response to HIV, STIs, tuberculosis and malaria. Promoted linkages between the MPSS and Venezuelan organizations to reach agreement and improve the national therapeutic program for children and adults living with HIV, including training staff, estimating needs for medicines, and their distribution.
- Supported nutrition education and recovery services by training health and nutrition professionals in nutritional recovery strategies, and providing basic supplies and essential medicines for children with nutritional needs.



### Preparing for the vaccine rollout

- Developed the COVID-19 Vaccine Introduction and Deployment Plan.
- Formed the National Coordination Committee with participation of different technical groups.
- Supported the country to define these priority groups, while considering different epidemiologic scenarios and to develop vaccination strategies.

**PAHO**



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