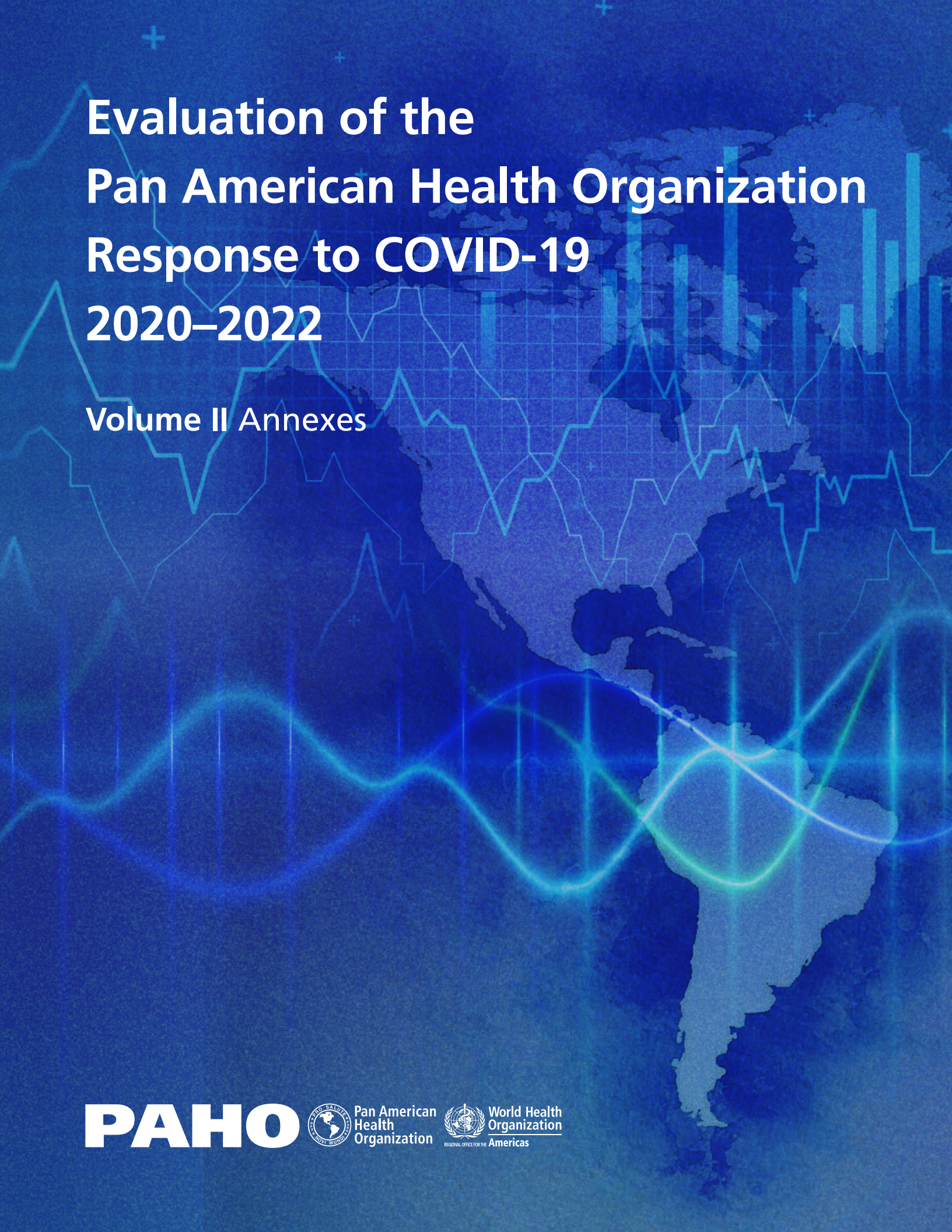
Evaluation of the Pan American Health Organization Response to COVID-19 2020–2022

Volume II Annexes



PAHO Pan American Health Organization

World Health Organization Regional Office for the Americas

Evaluation of the Pan American Health Organization Response to COVID-19 2020–2022

Volume II Annexes

Washington, D.C., 2023

PAHO Pan American Health Organization World Health Organization Americas

Evaluation of the Pan American Health Organization Response to COVID-19 2020–2022. Volume II. Annexes
ISBN: 978-92-75-12747-6 (PDF)
ISBN: 978-92-75-12748-3 (Print version)

Suggested citation: Pan American Health Organization. Evaluation of the Pan American Health Organization Response to COVID-19 2020–2022. Volume II. Annexes. Washington, D.C.: PAHO; 2023. Available from: https://doi.org/10.37774/9789275127476.

Cataloguing-in-Publication (CIP) data: Available at http://iris.paho.org.

Sales, rights, and licensing: To purchase PAHO publications, email: sales@paho.org. To submit requests for commercial use and queries on rights and licensing, visit: https://www.paho.org/en/publications/permissions-and-licensing.

PBE/2023

Design: Prographics
Cover images: © Shutterstock
Photos: © PAHO

Contents

Figures

Tables

Acknowledgments

The external Evaluation Team is grateful for the management by the Department of Planning, Budget and Evaluation, the Evaluation Reference Group, the Evaluation of the Pan American Health Organization Response to COVID-19 (EPRC) senior advisors, and Pan American Health Organization personnel from headquarters, country offices, and suboffices who contributed their time and advice. Also acknowledged is the participation in this evaluation of ministries of health, national counterparts, partners, donors, United Nations agencies, nongovernmental organizations, and other key stakeholders who shared their insights with the Evaluation Team.

The report was prepared by: Enric Grau, Team Leader; Robina Shaheen, Co-Team Leader (Quality Assurance/Methodologist); Héctor Gómez Dantés, Senior Evaluation and Subject Specialist; Juan Pablo Sarmiento, Senior Evaluation and Subject Specialist; Ximena Aguilera, Senior Evaluation and Subject Specialist (part of the external Evaluation Team until 5 September 2022); Elvira Carrió, Research Assistant; Michelle Ferreira Brito, Research Assistant; and Luisa Toro-Alzate, Research Assistant.

Independent senior public health advisors: Marceline Dahl-Regis, Senior Public Health Advisor; and Ronald St. John, Senior Public Health Advisor. Supported by: Rony Maza, Director, Department of Planning, Budget and Evaluation (PBE); Roberto La Rovere, EPRC Evaluation Manager, Senior Advisor, Evaluation, PBE.

PBE senior consultants: Guillermo Mendoza, Public Health and Evaluation Senior Advisor, Consultant; Maria Kobbe, Senior Evaluation Consultant.

PBE administrative assistants team: Francia Betanzos, Maevy Glaeser, Deborah Radcliffe, Administrative Assistants.

Acronyms and abbreviations

ACT	Access to COVID-19 Tools
Ag-RDT	antigen-based rapid detection test
AMC	advance market commitment
CEPI	Coalition for Epidemic Preparedness Innovations
COVAX	COVID-19 Vaccines Global Access
COVID-19	coronavirus disease 2019
COVID-19 SPRP	WHO COVID-19 Strategic Preparedness and Response Plan
CSO	civil society organization
CV	curriculum vitae
DAC	OECD Development Assistance Committee
ECLAC	United Nations Economic Commission for Latin America and the Caribbean
EPRC	Evaluation of the Pan American Health Organization Response to COVID-19
ERG	Evaluation Reference Group
EXM	PAHO Executive Management
GDP	gross domestic product
HIC	high-income country
HIV	human immunodeficiency virus
HSS	PAHO Department of Health Systems and Services
ICU	intensive care unit
IHR	International Health Regulations
ILI	influenza-like illness
ILO	International Labour Organization
IMS	incident management system
IMST	incident management support team
INGO	international nongovernmental organization
IPC	infection prevention and control
KII	key informant interview
LAC	Latin America and the Caribbean
LMICs	low- and middle-income countries
MoH	ministry of health
NCD	noncommunicable disease

NFP	National IHR Focal Point
NGO	nongovernmental organization
NIC	national influenza center
OECD	Organisation for Economic Co-operation and Development
OOP	out of pocket
PAHO	Pan American Health Organization
PASB	Pan American Sanitary Bureau
PBE	PAHO Department of Planning, Budget and Evaluation
PCR	polymerase chain reaction
PHE	PAHO Department of Health Emergencies
PHEIC	public health emergency of international concern
PPE	personal protective equipment
PWR	PAHO/WHO Representative
QA	quality assurance
RBM	results-based management
RRF	Regional Revolving Funds
RTE	real-time evaluation
SARS-CoV-2	novel severe acute respiratory syndrome coronavirus 2
SDG	Sustainable Development Goal
SPRP	Strategic Preparedness and Response Plan
TB	tuberculosis
ToR	terms of reference
UHC	universal health coverage
UNEG	United Nations Evaluation Group
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VOC	variant of concern
VOI	variant of interest
WASH	water, sanitation, and hygiene
WHO	World Health Organization

Annex 1.
Terms of reference

Title/purpose	Evaluation of the Pan American Health Organization Response to COVID-19 (EPRC)
Commissioner	Director, Department of Planning, Budget and Evaluation (PBE)
Evaluation management	Senior Evaluation Advisor, PBE
Contract modality	Consultancy
Location	The evaluation, to the largest extent possible, will be conducted in selected countries, and for the rest remotely.
Language(s) required	Operational: English and Spanish; and French and Portuguese as needed
Duration of contract	May – October 2022 (until November for the Team Leader)

1.1. Introduction

Since the report of the first case, the new coronavirus disease (COVID-19) has spread to over 215 countries and territories around the globe. On 30 January 2020, the Director-General 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 Region of the Americas led in the number of confirmed cases and deaths worldwide *(1)*.

By 18 August 2021, Brazil and the United States of America ranked in the top 10 countries, reporting the highest numbers of cumulative cases globally. Brazil, Colombia, Mexico, and the United States of America ranked in the top 10 for cumulative deaths globally.

While the pandemic is still evolving, on 8 March 2022, the weekly epidemiological update of the Pan American Health Organization (PAHO or the Organization) reported that overall trends of COVID-19 were either declining or stabilizing in most regions. However, in the Americas, with only 13% of the world's population, 34% of cases and 44% of total global deaths were reported from February 2020 to February 2022. More recently, trends in COVID-19 hospitalizations or admissions to intensive care units (ICUs) have been declining to pre-Omicron variant levels in many countries *(2)*. However, Peru, Mexico, and Ecuador had the Region's highest fatality rates *(3)*.

As the specialized public health agency for the Americas and the Regional Office of WHO for the Americas, PAHO provides essential leadership to fight COVID-19. In mid-January 2020, PAHO activated an organization-wide response to support all countries and territories in the Region of the Americas to address and mitigate the impact of the pandemic *(4)*.

The Director and PAHO's Executive Management team included the evaluation of PAHO's response to the COVID-19 pandemic in the corporate evaluation workplan for 2022. The evaluation seeks to provide an objective and independent assessment of PAHO's preparedness for and response to the COVID-19 pandemic, and the contribution of PAHO's operations to results, to inform policymaking and decisionmaking during the ongoing and future health crises.

1.2. Background and context

The pandemic surged at a time of financial crisis for PAHO. In 2020, the Organization faced insolvency due to some Member States' nonpayment of assessed contributions. However, appeals to the PAHO Governing Bodies and donors resulted in the payment of assessed contributions by Member States and mobilization of voluntary contributions. Donors, old and new, contributed to PAHO's response to support countries during the health crisis.

Working through its regional and country-level incident management support teams (IMSTs) in Latin America and the Caribbean, PAHO provides direct emergency response to ministries of health (MoHs) and other national authorities to scale up their readiness and response operations *(1)*. PAHO's support includes surveillance, testing, and laboratory capacity improvements; preparing and strengthening health services; infection prevention control; clinical management; and risk communication, consistent with the WHO COVID-19 Strategic Preparedness and Response Plan (COVID-19 SPRP) and PAHO's Response to COVID-19 Outbreak in the Region of the Americas: Response Strategy and Donor Appeal. Below is the technical cooperation approach of the Pan American Sanitary Bureau (PASB or the Bureau), based on the 10 pillars of PAHO COVID-19 response strategy *(1)*:

1. Coordination, planning, financing, and monitoring;
2. Risk communication, community engagement, and infodemic management;
3. Surveillance, epidemiological investigation, contact tracing, and adjustment of public health and social measures;
4. Points of entry, international travel and transport, mass gatherings and population movement;
5. Laboratories and diagnostics;
6. Infection prevention and control, and protection of the health workforce;
7. Case management, clinical operations, and therapeutics;
8. Operational support and logistics, and supply chains;
9. Strengthening essential health services and systems;
10. Vaccination (since 2021).

Each of these interrelated pillars of PAHO's SPRP comprises various activities, products, and services *(5, 6)*. While addressing all pillars, since September 2020, PAHO has emphasized five strategic lines of action involving the strengthening of (1) leadership, stewardship, and governance; (2) epidemic intelligence; (3) health systems and service delivery networks; (4) emergency operations response and supply chains; and (5) support for the introduction of and access to COVID-19 vaccines *(7)*. As the leading response entity in PAHO, the Department of Health Emergencies (PHE) monitors COVID-19 cases, deaths, and the epidemiological situation in the Region, and oversees the delivery of vaccines and providing Emergency Medical Teams, among other activities *(7)*.

As in other parts of the world, the pandemic has taken a heavy toll on the economic, social, and political fabric of the countries in the Region. Poverty and inequality increased, and many countries experienced

protests and political strife.[1] In addition, financial difficulties, socioeconomic decline, and supply chain disruptions affected people's lives and their access to health care. The evaluation will therefore also look in a holistic way at PAHO's efforts in working with countries and partners to attenuate the pandemic's impact on public health, essential health services, and inequity gaps. It will consider how the pandemic's socioeconomic effects compounded with increasing poverty, increasing food insecurity, and how lack of access to health care severely affected the most vulnerable.

Once the vaccines had been approved, PAHO played a role in procuring safe vaccines and in their delivery to countries in the Region. However, besides tackling multiple variants, another issue confronted during this pandemic has been the "infodemic" *(8)* and misinformation in the fight against COVID-19. Resistance to the vaccines by antivaccination movements, and the overabundance of information, made it difficult for people to find reliable guidance *(9)*.

1.3. Purpose, objectives, and key evaluation questions

There is an urgent need for an in-depth independent assessment of PAHO's response to the ongoing COVID-19 pandemic in an operating environment that keeps changing, hence calling for continuous adaptation. The purpose of the EPRC is to independently evaluate PAHO's overall response to the COVID-19 pandemic at various levels, identifying trends and generating institutional and cross-country learning, informing timely actions to strengthen the ongoing response to the pandemic, and preparedness for future health emergencies.

The EPRC goes beyond current reporting efforts, seeking to inform leadership and decisionmakers about the challenges, areas for improvement, lessons learned, and good practices in PAHO's response to the COVID-19 pandemic. It also seeks to increase PAHO's knowledge of the effectiveness of the ongoing response so far and institutional capacity for emergency response.

The specific objectives are to:

Assess PAHO's preparation, internal organization, and implementation of the COVID-19 pandemic response strategy, and document key achievements as well as challenges, gaps, and areas for improvement.

1. Examine key enabling and limiting factors that have been responsible for achievements and gaps, including the implications for how PAHO delivers its regular programs, outside of the emergency context of the COVID-19 response.
2. Provide evidence-based recommendations for corrective actions to strengthen the pandemic response while building a resilient recovery.

---

1 The number of poor people had risen by 22 million by the end of 2020. Economic Commission for Latin America and the Caribbean. Pandemic prompts rise in poverty to levels unprecedented in recent decades and affects inequality and employment. Santiago: ECLAC; 2021. Available from: https://www.cepal.org/en/pressreleases/pandemic-prompts-rise-poverty-levels-unprecedented-recent-decades-and-sharply-affects.

The following questions will guide the evaluation and be part of the final evaluation matrix (Annex Table 1).

Annex Table 1. Evaluation matrix

RELEVANCE (INCLUDING COHERENCE AND COORDINATION)	1. To what extent is PAHO's COVID-19 response addressing Member States' overall priorities? How have these needs been determined at country, subregional, and regional level? 2. To what extent did PAHO's COVID-19 response address the needs and priorities of the Region's population, particularly the most vulnerable? 3. Which strategic lines of action or activities do Member States and other local, country-based partners consider most relevant? a. How has PAHO engaged with partners, including other UN agencies, academia, NGOs, CSOs, and the private sector to ensure a focus on local needs? b. How could PAHO better engage with partners to ensure coordinated support toward addressing local priorities?
EFFECTIVENESS	4. How effectively did PAHO implement the response to COVID-19 to achieve its intended outcomes? What have been the main factors (internal, external) affecting PAHO's response? 5. To what extent did PAHO's COVID-19 response benefit the population, particularly the most vulnerable? 6. What have been the most significant challenges to emerge in responding to COVID-19 across countries and subregions? a. Which activities are most effective / least effective? Why? b. What was the level of uptake by Member States of PAHO's Technical Cooperation in pandemic response? c. What patterns and trends and lessons learned emerge from the experiences of Member States' response to pandemic crisis management? 7. What could strengthen PAHO's ongoing response and the quality of the related service delivery by the organization?
EFFICIENCY	8. How efficiently did PAHO adapt by repurposing to respond to the COVID-19 emergency in terms of use of time, resources, and the timeliness of delivery of products and services? a. How did this affect PAHO's regular program delivery? b. What organizational arrangements and procedures were most efficient, and which ones might need to improve? c. What factors influenced PAHO's ability to rapidly mobilize support for pandemic response? 9. What lessons and best practices have been emerging from PAHO's implementation of the COVID-19 response? a. How efficiently has PAHO coordinated its response with partners (United Nations, donors, NGOs, CSOs) to ensure a timely and cost-effective response and avoid duplication? b. What have been the most efficient practices in implementing PAHO's response, and the most significant gaps?

(Continued)

SUSTAINABILITY	10. What should be done differently to enhance COVID-19 response programming while addressing longer-term health needs or future emergencies? a. To what extent is PAHO's response contributing to equitable, resilient, and sustainable health systems? b. What, if any, changes could improve PAHO's response while addressing longer-term needs? 11. What pandemic preparedness actions and response measures were shown to be effective prior to and during the pandemic and will strengthen health systems over time?

1.4. Scope and approach

The evaluation will examine PAHO's ongoing response to the COVID-19 protracted emergency in the Region of the Americas. The EPRC will examine ongoing response operations under way by the entire organization. Although PAHO Executive Management, PHE, the regional IMST, and the country-based Incident Management Teams played a pivotal role, many other units in PAHO supported the response effort. For example, the Department of Health Systems and Services (HSS), Department of Procurement and Supply Management, and Department of Communications also played key roles, among other players. COVID-19 response operations have therefore been an organization-wide effort. The EPRC will therefore document (1) the role, (2) responsibilities, and (3) actions of regional, subregional, and country offices during the implementation and delivery of response operations.

The time frame covered under this evaluation will be from January 2020 to April 2022. The geographic area of focus includes all of PAHO's regions. The Evaluation Team may propose an approach for in-depth case studies of a subregion or a representative sample of countries to examine the appropriateness of COVID-19 response operations in more detail.

The EPRC, in addition to fulfilling the accountability function, is also a formative evaluation of the results of ongoing operations, highlighting good practices and lessons learned during implementation. The approach will use elements of real-time evaluations (RTEs) *(10)* that are applicable to the context of PAHO and the pandemic to enable using findings in timely ways to improve the performance of PAHO's ongoing response to the COVID-19 protracted emergency. In other words, in line with PAHO's evaluation policy, there is a constant need for learning and adaptation during the COVID-19 response. The EPRC will strive to provide timely insights to entities (PHE, IMSTs, collaborating entities) in their implementation of the COVID-19 response.

RTEs use a participatory approach (engaging more and cross-learning with stakeholders). RTEs are often utilized in emergency operations to inform and support adaptive management while the emergency response is under way. Evaluators collect data and regularly consult with key stakeholders to determine what is going well and what aspects need improvement. Recommendations are jointly arrived at with feedback from stakeholders and may be used by the relevant evaluated entities soon after the initial findings in order to manage the programs adaptively. As a result, this evaluation focuses on accountability as well as organizational learning while also supporting ongoing improvement of PAHO's response.

In addition to key stakeholders within the PASB, the Evaluation Team will also interview key informants from Member States and key partners; however, such interviews will only seek their input regarding PAHO's response to the pandemic. This evaluation will not assess how well Member States responded to the pandemic, but rather how PAHO collaborated with them and contributed to outcomes and the uptake of PAHO's guidance, technical products, and services.

1.5. Methodology

The EPRC will assess the contribution of PAHO's operations to results using qualitative and quantitative sources of information to validate and triangulate findings. The evaluation will use primary and secondary data sources described below, through real-time data collection, with initial feedback and triangulation of findings during the fieldwork and the data collection phase. In addition, evaluators will engage with stakeholders and collect information using focus groups and team discussions to understand what happened, why, and ways to sustain strengths and improve weaknesses. While adopting a "shared learning" approach, the evaluation will gather information from key stakeholders and, as much as possible depending on the evolving context of the pandemic, may involve field visits by the Evaluation Team in selected countries.

The team will use primary sources of qualitative data collection methods[2] such as:

- Survey questionnaire for PAHO country offices (PAHO/WHO Representatives [PWRs], incident managers, and country office teams, using the PASB Management Information System or software tools that ensure confidentiality);
- The selection of countries will be based on the evaluation criteria and key questions. Given the time and budget, only a subset of countries can be covered in depth;
- Brief survey questionnaire for implementing partners at national levels (government, civil society organizations [CSOs], private sector, etc.);
- Semi-structured key informant interviews (KIIs), and follow-up, in-depth, in-person/remote KIIs, with PAHO personnel,[3] partners, and beneficiaries for triangulation or validation;
- Phone surveys and phone calls with implementing partners and front-line workers;
- Site visits and participant observation to a sample of select countries and communities.

The evaluation will also use existing secondary sources of data, including PAHO's internal documentation,[4] monitoring reports, progress reports, statistics (disaggregated as much as possible by country, ethnicity, age, and gender) on COVID-19 cases, deaths, vaccines delivered, vaccinations, and of decentralized evaluation reports and studies that will be considered to have a sufficient level of quality, in line with PAHO's evaluation policy. These internal documents will include information from subregional, regional, and country offices and will be listed through a rapid evaluability assessment to ascertain the quality, amount, and validity of the information. Secondary data sources can also be used to validate and triangulate the primary data sources.

The team will use reliable[5] data available across countries and identify indicators to assess progress as compared to baseline data before the pandemic started, including reference to Sustainable Development Goal (SDG) indicators relevant to PAHO's work. The evaluation will use health statistics reported to PAHO by the Member States with a cutoff date of April 2022 (annual reporting period). The situation before the pandemic started, in January 2020, will be used as the counterfactual for the purposes of comparison.

---

2 A mix of PAHO's staff, stakeholders, implementing partners and enablers of programs, partners in resource mobilization, and beneficiaries will be interviewed. Insights will be triangulated and validated.

3 The evaluation approach will be of a hybrid type, conducted by external consultants in collaboration and support of PBE's evaluation unit. PBE commissions corporate evaluations, but for implementation, the evaluation manager may work with consultants (instead of PBE doing it alone or issuing an RFP). The evaluation will also use a mix of methods, and a combination of country visits, if the situation permits, combined with remote interviews.

4 PBE with assistance from the Evaluation Reference Group (ERG) will prepare a Share Point with relevant documents for the team to access.

5 Quality and reliability of data reported by countries will be carefully assessed by the Evaluation Team.

Country-level information may add to the stream of evidence and determine the final choice of methods and data collection tools. Members of the Evaluation Team, with facilitation and support of the evaluation process by the Senior Evaluation Advisor, will validate and triangulate the information, reducing potential biases, thus ensuring the soundness of findings.

1.6. Evaluation use and audience

The EPRC also has the potential to offer timely insights at different levels. Primary users will be the PAHO Executive Management (EXM) team and PHE, and other technical and enabling departments, and subregional and country offices, which harness the findings to improve the ongoing implementation of the response to COVID-19. The evaluation will also inform potential adjustments to ongoing and future strategies, assist with the next round of planning, and inform overall decisionmaking on response implementation and delivery. It will also help PAHO's emergency response build more resilient systems for future health emergencies. Finally, the information generated will help PAHO's country, subregional, and regional offices to inform broader forward-looking strategic decisions for building more resilient health systems. The evaluation report summary may be published and shared with PAHO's Governing Bodies, and the report shared at proper times with government authorities.

1.7. Deliverables and workplan

The Evaluation Team will submit reports as detailed in Annex Tables 2 and 3.

Annex Table 2. Deliverables and work plan

TITLE	CONTENT	LANGUAGE	SUBMISSION TIMING OR DEADLINE
Inception report	• Introduction, context; purpose, objectives, criteria, key questions • Methodology for evaluation, including: - Evaluation matrix: Questions, with indicators, data collection methods - Stakeholder analysis with indication of groups to be consulted during the process, and how to engage them - Field visit approach (if feasible) or analysis of risks related to the evaluation methodology and mitigation measures - Workplan / timetable of relevant annexes - Draft of the intervention logic	English	Presented for feedback to the Evaluation Reference Group (ERG) by 15 May

(Continued)

TITLE	CONTENT	LANGUAGE	SUBMISSION TIMING OR DEADLINE
Summary of the draft preliminary findings and the main areas of recommendations (and key elements of the draft report)	• A short description of the purpose and objectives of the evaluation • A description of the methodology used, explanation of limitations of the evaluation, availability of data, contextual factors, or any other information • A presentation of emerging findings (answers to evaluation questions), analysis, and of the evidence-based conclusions and the areas of recommendations • A presentation of key and emerging findings, conclusions, and areas of recommendations for sharing with PAHO and EXM • A chapter on good practices and on the lessons learned from the evaluation for future decisionmaking and programming	English	Evaluation data collection and preliminary analysis are completed in August Draft initial findings, and the emerging areas of recommendations, are shared for ERG feedback by 30 August
Evaluation summary	The evaluation summary is short, five pages, tightly drafted, to-the-point, free-standing. It should focus on the purpose and objectives of the evaluation, outline main analytical points, methodology and limitations, indicate key findings and main conclusions, best practices and lessons learned, and specific recommendations	English, Spanish, summary in French and Portuguese	After comments, initial draft of findings and recommendations is shared with the Director and EXM by 15 September
Final report and final evaluation summary	Same specifications as for draft final report and draft evaluation summary, incorporating comments received from ERG and manager on the draft reports whenever relevant.	English, Spanish	Shared for feedback by ERG before 1 November Presented to EXM by 15 November 2022
Evaluation brief	Contribute to drafting and publishing evaluation briefs that summarize the evaluation report	English and Spanish, (Portuguese, French)	December 2022

Annex Table 3. Deliverables and time frame

PHASE	DELIVERABLES	TIME FRAME (WORKING DAYS)
Inception [Deliverable 1]	1. Kick-off teleconference call and first work/initial tentative plan (5 pages maximum). 2. Inception report: Max 15 pages excluding annexes, which includes an evaluation workplan with response to the ToR and proposals for any changes to the ToR; evaluation matrix and further development of the evaluation question and subquestions; team composition and functions; approach detailing methods, data collection, data analysis, and limitations; breakdown of the level of effort and role of each team member; budget including travel; and the final report outline. The inception report should also include a reconstructed intervention logic to be tested and validated in the evaluation process.	30 April 15 May
Data collection, analysis, and draft report [Deliverable 2]	3. A desk and field note short report highlighting the desk and fieldwork key findings, some preliminary conclusions, proposals for the pending tasks, and, when required, an updated workplan/ timeline to be discussed with the manager and Evaluation Reference Group (ERG).	15 July
	4. Summary of draft preliminary findings, main areas of recommendations, including working notes (in annexes), analysis, limitations, good practices and recommendations. 5. Presentation of preliminary findings: a PowerPoint debriefing of findings by questions, conclusions, and preliminary recommendations to be shared with key stakeholders.	30 August
Evaluation summary and initial key findings	6. Summary report (to include preliminary findings, conclusions, and recommendations) to be shared with the Director and EXM first, then with key stakeholders. Key findings require time to reflect and validate what is emerging. In addition, time will also be needed for counterparts to feedback on the findings since they are also learning.	15 September
Validation and finalization [Deliverable 3]	7. Final report (Including summaries, best practices, recommendations, and annexes). 8. Presentation of final findings. The final EPRC report reflecting comments from the ERG and the participants in stakeholder workshops; the length of the final report will be maximum 50 pages, plus annexes. The evaluation summary report will not be longer than 5 pages.	15 November
Dissemination, management response	Evaluation summary reports will be public. The EPRC report will be disseminated based on the modalities that will be decided by EXM, in line with Para. 40 of the Evaluation Policy. Coordination of key actions for management response; follow-up with relevant entities.	8 December

Evaluation management and quality assurance

PBE is commissioning and managing this evaluation. PBE and the Senior Evaluation Advisor, as Evaluation Manager, will independently recruit evaluation consultants and coordinate the recruitment process. The independent and external Evaluation Team will (1) be accountable and report directly to the Evaluation Manager, and (2) maintain periodic communication with the Evaluation Manager. PBE will help facilitate travel and meetings of the Evaluation Team, and of the Evaluation Manager. The PBE Evaluation Unit will also be responsible for the appropriate orientation/onboarding of the Evaluation Team members – in collaboration with PAHO – and of the consultations during the inception phase.

The PBE Evaluation Unit will have overall responsibility for ensuring the quality, objectivity, and independence of the evaluation. As part of quality assurance (QA), PBE will review all deliverables (terms of reference, inception report, evaluation summary, final report) for compliance with the 2021 PAHO Evaluation Policy. PBE will also provide the draft deliverables to the Evaluation Reference Group (ERG) for the EPRC. The ERG will act in an advisory capacity: the ERG will share comments on the key draft deliverables during the evaluation process, within a limited and well-defined time frame. The ERG, chaired by PBE, will be composed of two technical directors (PHE and HSS), and three PWRs (the Bahamas, Brazil, and Guatemala) covering three subregions.

Quality, code of conduct, and norms for evaluation in the United Nations system

In line with the 2021 PAHO Evaluation Policy, all evaluations in PAHO are informed by the United Nations Evaluation Group (UNEG) Norms and Standards for Evaluation (2016) *(11)* and Ethical Guidelines for Evaluation *(12)*. The quality of deliverables for evaluations should follow UNEG guidelines and PAHO/WHO Evaluation Handbooks. Evaluations of PAHO-supported activities must be independent, impartial, and rigorous, and evaluators must demonstrate personal and professional integrity. The Evaluation Team must also abide by the UNEG code of conduct throughout the process *(13)*. In addition, external contractors shall abide by the PAHO requirements for external contractual agreements.

Evaluators and Evaluation Team skills

The team will be composed of at least three senior evaluators, including one with background and experience in public health and/or health emergency response evaluation, and will preferably include an emergency response specialist (team member). In addition, the team will include one senior member with relevant methodological expertise who will be responsible for internal quality assurance, and a research assistant preferably with support from a company/institution with extensive experience in program evaluations and development programs.

Consultants must possess experience in planning and implementing evaluations using robust methods. In addition, they must understand PAHO and preferably have experience with health emergencies. The skills and qualifications for team leader and team members include the following:

Team leader (evaluation and/or emergency response specialist)

- A minimum of 12 years of evaluation experience in developing countries or countries in the Region with excellent understanding of evaluation principles and methodologies, including capacity in qualitative/quantitative evaluation methods, previous experience in evaluations of public health interventions, and emergency and health responses;
- Closely familiar with working in the Region of the Americas;
- Experience in conducting evaluations for United Nations agencies or major bilateral donor country programs, and familiarity with UNEG norms and standards;
- Experience in leading similar program evaluations of PAHO or WHO;

- Understanding of crosscutting themes and social determinants of health and inequity;
- Facilitation skills, particularly related to programmatic and organizational learning, and virtual facilitation skills to engage effectively remotely with stakeholders (desirable);
- A master's degree in a topic relevant to the evaluation;
- Skillsets such as respect for stakeholders, partners, beneficiaries, and ethical research (confidentiality and anonymity), flexibility, energy, resourcefulness, initiative, humility, willingness to learn on the go, and ability to resolve conflicts;
- Experience in conducting developmental evaluations is an asset;
- Understanding of results-based management (RBM) and RBM-based evaluations in the context of public service and experience with log frames, intervention logic, theory of change;
- Experience of, and ability to design and factor in, essential crosscutting areas such as gender and ethnicity, ethics, and human rights effectively into the evaluation process;
- Diplomacy and tact in carrying out and presenting findings of evaluation processes;
- Excellent command of English and/or Spanish (French or Portuguese desirable), with excellent report-writing skills in English and a demonstrated track record of producing high-quality reports on time.

Sectoral team member(s) (COVID-19 emergency response)

- Previous relevant experience working in health emergency response operations (national or international);
- A master's degree in a topic relevant to the evaluation;
- An excellent understanding of the disaster response management and health emergency response situations/context, policies, and approaches in the Region of the Americas, including how the Region's public health emergency health systems and services function;
- Experience evaluating public health services or related development interventions;
- Language skills in English, as well as Spanish (with French or Portuguese desirable).

Internal quality assurance (and methodology) team member

- Experience evaluating public health services or related development interventions;
- A master's degree in a topic relevant to the evaluation (preferable);
- Excellent computer skills; experience with statistical / text analysis software (desirable);
- Excellent written and verbal communication skills in English and Spanish;
- Knowledge of UNEG norms and standards for evaluation.

Research assistant

- Two years of professional experience with exposure to monitoring and evaluation;
- Excellent writing skills in English and Spanish;
- Solid computer skills in the Microsoft Office suite, including Excel;
- Experience reviewing data to determine their accuracy and synthesizing documents;
- Experience in surveys, interviews, focus groups, or other data collection methods;
- Full-time availability during the core of the evaluation period (May–September).

Assessment of CVs and how to apply

PBE will review the curriculum vitae (CV) of applicants based on experience, qualifications, availability, and technical aspects useful for this consultancy. One consideration in selecting team members is knowledge about the Region, being from the Region, or having regional experience in the health sector. Selection will also consider the team profile and capacity (experience and qualifications of consultants who may become team members, past relevant experience, blend of expertise, availability of researchers in the Region, rules of

engagement and supervision). Please attach other information relevant to the ToRs. Applicants will be asked to submit the following:

1. A detailed but concise CV, with hyperlinks to previous evaluation reports or references to previous professional work, highlighting the areas of relevance for this evaluation.
2. A cover letter highlighting previous experience in monitoring and evaluation or health emergencies specifying whether they apply for (1) team leader, (2) sector team member, (3) internal quality assurance team member, or (4) research assistant.
3. A one-page summary of the preferred methodological approach for this evaluation.

Qualified, available, and interested consultants must submit (1) CV and (2) cover letter no later than 10 April 2022 to evaluation@paho.org. If considered, consultants will be asked to submit additional documents, including (3) the methodological approach relevant for the task.

The total duration starting May 2022, is 6 months, with completion of the evaluation phase by August 2022 and of the reporting, initial sharing, validation, finalization, and dissemination by November 2022 (Annex Table 4).

Annex Table 4. Gantt chart of the proposed evaluation timeline

PHASE/ACTIVITY BY THE EVALUATION TEAM	MAY	JUN	JUL	AUG	SEP	OCT	NOV
Inception phase							
Kick-off teleconference call and first workplan							
Finalize a brief evaluability assessment, evaluation matrix, and tools (interview guides, surveys, etc.), intervention logic, and ethical clearance							
Draft inception report							
Comments/QA on inception report							
Final inception report. [Deliverable 1] (P1: Payment 1/30%)[a]	P1						
Data collection and draft report							
Desk review: synthesis document on program performance from monitoring and evaluation reports							
Conduct key informant interviews (in-country and/or remotely)							
Desk and field note mini report highlighting desk and fieldwork findings, some preliminary conclusions, proposals or updates on pending tasks							
Conduct focus group discussions (in-country/ remotely)							
1st draft report. Present preliminary findings, validation workshop							

(Continued)

PHASE/ACTIVITY BY THE EVALUATION TEAM	MAY	JUN	JUL	AUG	SEP	OCT	NOV
Evaluation summary report with preliminary findings, conclusions, and recommendations (for EXM)							
Comments on draft evaluation report (round 1, round 2)							
2nd evaluation summary report, initial draft [Deliverable] (P2: Payment 2/30%)					P2		
Final report							
Final evaluation report, and relevant presentation (.PPT)							
Evaluation summary (final) and evaluation brief (P3: Payment 3/40%)							P3

[a] Each payment only after full validation of the related report.

Annex 2.
Extended background

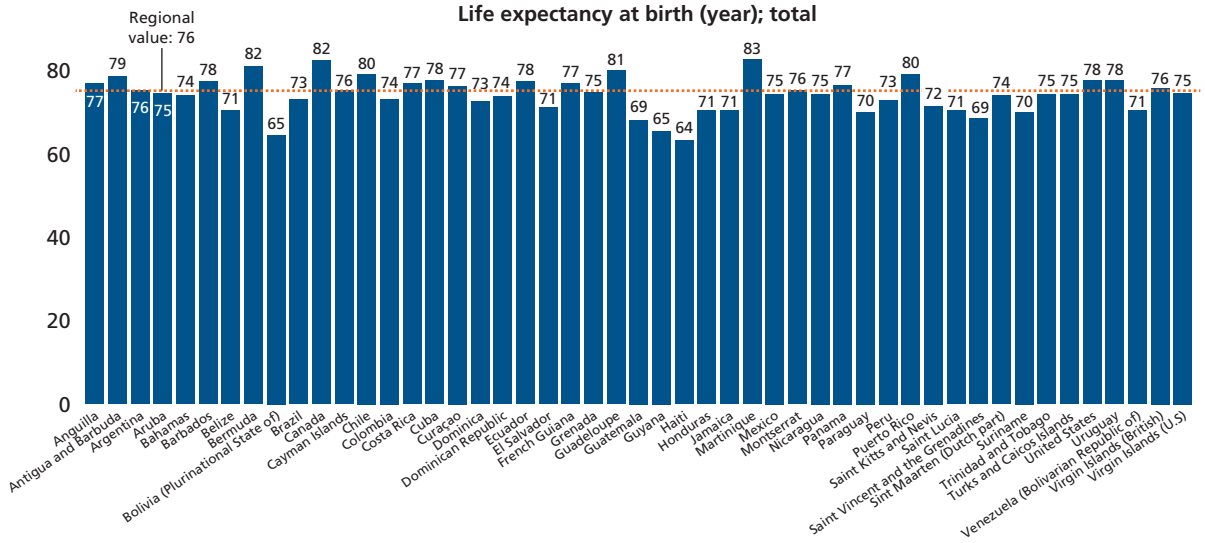
2.1. Overview of the health situation in the Americas before COVID-19

Health status in the Americas

In the 20 years before the coronavirus disease 2019 (COVID-19) pandemic, the Region of the Americas showed positive progress on its overall health status. Evidence of this is the increase in life expectancy at birth, the best-known measure of population health status, by almost four years between 2000 and 2017 in Latin America and the Caribbean (LAC) *(14)*. The rise in life expectancy, the decrease in infant mortality by 35%, and in under-5 mortality by 46% during the same period indicate the improvements in the effectiveness of the health systems and the overall well-being of the LAC population *(14)*.

However, the Region exhibits marked inequalities between countries and within countries, and the averages can mask significant gaps. Haiti, for instance, shows a life expectancy average of less than 64 years for a child born in 2022, 12 years below the regional average, 76 (Annex Figure 1) *(15)*. Furthermore, countries like Guyana and the Bolivarian Republic of Venezuela have experienced an increase in the infant mortality rate of almost 40% over the last 20 years, and the infant mortality rate among the Indigenous population is 1.8 times higher than in nonindigenous communities in 11 countries in the Region *(16)*. These three countries (Haiti, Guyana, and Venezuela [Bolivarian Republic of]) shared the higher figures for the under-5 mortality rate in the Region *(14)*.

Annex Figure 1. Life expectancy at birth (years) total in the Americas by 2022



Source: PAHO Core Indicators Portal.

Maternal mortality, an indicator of health system performance, showed a reduction of 26% between 2000 and the present. Still, maternal mortality remains significantly higher in Caribbean countries and territories, such as Haiti, Cuba, Suriname, Sint Maarten, and Belize, where the ratio is above 160 maternal deaths per 100 000 live births (the regional average is 50 deaths per 100 000 live births) *(15)*.

Demographic and epidemiological transition in the Americas

The substantial reduction in fertility rates, decreased mortality rates, and increased life expectancy in the Americas has brought rapid demographic and epidemiological changes. These changes are reflected in an increased burden from noncommunicable diseases (NCDs) and the sustained burden of communicable diseases, which is increasing within health systems initially designed to provide episodic and acute care *(17)*. The fertility rate fell from 5.9 to 2 live births per woman between 1960 and 2020, with some data suggesting that, by the end of the century, the fertility rate in Latin America will be 1.7 children per woman *(18, 19)*. On the other hand, in 2019, NCDs were responsible for 76% of all deaths in the Region, in contrast with 13% due to communicable diseases, maternal, perinatal, and nutritional conditions, and 11% related to injuries *(20)*.

The Caribbean region has become the global epicenter of NCDs, with 78% of all deaths there attributable to NCDs (global average of 74%) *(20, 21)*. Premature mortality due to cardiovascular diseases, diabetes, cancer, and chronic respiratory diseases is higher in the Caribbean (18.8%) than in the whole LAC region (14.8%) *(20).* On the other hand, gradual and sustained decreases have been observed in deaths from communicable diseases, a trend especially evident in Haiti (25%), Guatemala (22%), and the Plurinational State of Bolivia (19%) *(22)*. Regarding deaths by injuries, although Colombia was the country with the highest level of injury deaths (including violence and self-harm) in the Region in 2000 (28%), by 2019 it had shown a decrease of 50% in deaths related to injuries (14%) *(22, 23)*.

The incidence of tuberculosis (TB) showed a reduction of 10% between 2000 and 2018; however, 12 out of 33 countries in the Region showed steady or increased incidences *(14, 24)*. Access to high-quality TB services in LAC has expanded, increasing the treatment success rates in Grenada, Dominica, and Barbados. In contrast, the treatment success rates are low in Jamaica (23%) and Argentina (54%), not reaching the LAC average rate (76%) *(14)*.

Regarding the incidence of human immunodeficiency virus (HIV) infections, the trend has been positive, with most of the countries of the LAC region reducing incidence rates. The highest reduction was in El Salvador (50%), followed by the Bahamas (33%) and Nicaragua (30%). In contrast, although countries like Chile, Brazil, and Costa Rica showed an increase in their HIV incidence between 2010 and 2018, these three countries remain below the average for HIV prevalence in the Region *(14)*. Also, following the 90-90-90 target (90% of all people living with HIV will know their HIV status; 90% of all people diagnosed with HIV will receive sustained antiretroviral therapy; and 90% of all people receiving antiretroviral therapy will achieve viral suppression), the Region has made significant progress on its HIV status, showing a scale-up in antiretroviral therapy provision and HIV diagnosis *(14, 24)*.

Universal health coverage

Achieving universal health coverage (UHC), or ensuring that people have access to, and receive, the high-quality health services they need without financial hardship, has been targeted with the aim of "leaving no one behind" *(14, 17)*. To achieve UHC, many countries in Latin America implemented various health system reforms, reflected in the increase in spending on health (from 1.4% of gross domestic product [GDP] in 2000 to 2.2% in 2015), and in reaching an overall index of essential coverage of 76%–77%, like Argentina, Brazil, Colombia, and Mexico *(24, 25)*. These reforms expanded access to primary healthcare systems and coverage for noncommunicable and chronic diseases, increased the number of skilled healthcare workers,

and supported programs that provide access to treatments at zero cost, while partially guaranteeing high-cost drugs and cancer treatments *(25)*. However, Latin American health systems still present challenges, like the fragmentation in organization and service delivery, the segmentation of financing, and the poorly regulated private sector, giving space to higher inequalities in health outcomes and making health services less affordable, thus preventing the health systems from adjusting to address the emerging health needs brought by the current epidemiological and demographic transition that the Region is facing *(26)*.

Healthcare resources

Access to and provision of high-quality services improve health outcomes in the population. Health workers, including doctors and nurses, are the cornerstone of health systems *(14)*. On average, LAC countries have two doctors per 1000 population, with most of the countries and territories in the Region of the Americas rating below the Organisation for Economic Co-operation and Development (OECD) average of 3.5, except for Cuba, with over 9 doctors per 1000 population, and Argentina, Uruguay, Cayman Islands, and Trinidad and Tobago, which rate above regional average *(14, 22)*. The supply of doctors is lowest in Honduras, with the number of physicians below 0.5 per 1000 population *(14, 22)* and Nicaragua below 1 per 1000 population. (Annex Table 5).

Annex Table 5. Health care resources per country and territory in the Region (latest indicator reported to PAHO/ WHO up to 2021)

SUBREGION	HOSPITAL BEDS RATIO (/1000 POPULATION)	PHYSICIANS (/10 000 POPULATION)	NURSES (/10 000 POPULATION)	MIDWIVES (/10 000 POPULATION)
North America				
Bermuda	5.9	27.0	67.3	
Canada	2.6	27.8		0.5
Mexico	1.0		18.1	
Puerto Rico	3.0	28.6	94.1	
United States of America	2.7	25.9	98.9	
Central America				
Belize	1.0			
Costa Rica	1.3	24.0	41.8	
Cuba	4.2	94.3	77.3	
Dominican Republic	1.4	19.8	6.3	
El Salvador	1.2	12.0	10.1	0.4
Guatemala	0.4		0.4	
Honduras	0.7	2.1	1.8	
Nicaragua	0.9	9.0	8.0	10.6
Panama	1.9	16.3	16.9	
Latin Caribbean				
French Guiana	3.6			
Guadeloupe	6.1			
Haiti	4.8			
Martinique	5.3			

(Continued)

SUBREGION	HOSPITAL BEDS RATIO (/1000 POPULATION)	PHYSICIANS (/10 000 POPULATION)	NURSES (/10 000 POPULATION)	MIDWIVES (/10 000 POPULATION)
Andean Area				
Bolivia (Plurinational State of)	1.4	9.2	4.8	
Colombia	1.7	23.8	15.3	
Ecuador	1.3	23.2	14.9	1.3
Peru	1.6	16.5	19.9	6.2
Venezuela (Bolivarian Republic of)	1.0	19.2		
Southern Cone				
Argentina	3.3	39.1	37.2	1.4
Brazil	2.4	20.8	15.5	2.0
Chile	2.0	11.1	8.7	
Paraguay	1.0			
Uruguay	2.5	54.7	22.7	2.4
Non-Latin Caribbean				
Anguilla	1.7			
Antigua and Barbuda	3.3			
Aruba	2.0			
Bahamas	2.7		25.8	4.7
Barbados	5.7			
Cayman Islands	3.8			
Curaçao	3.8			
Dominica	3.0			
Grenada	3.2			
Guyana	2.6	17.1	9.6	6.1
Jamaica	1.7	26.4		
Montserrat	6.7			
Saint Kitts and Nevis	4.3	26.0	54.0	38.0
Saint Lucia	2.0	21.1	29.2	8.7
Saint Vincent and the Grenadines	4.2	10.1	31.0	2.5
Sint Maarten (Dutch part)	1.6			
Suriname	2.8	11.8	24.7	2.6
Trinidad and Tobago	1.6	43.3		
Turks and Caicos Islands	1.1	20.6	34.8	0.7
Virgin Islands (UK)	1.9			
Virgin Islands (US)				

Source: PAHO Core Indicators Portal.

The gap in the availability of nurses and midwifery personnel is more noticeable, with an average number of 3 nurses per 1000 population; the OECD average is 9 nurses per 1000 population *(14)*. In 2018, the country with the highest number of nurses in the Americas was the United States, with 15, followed by the territory of Puerto Rico and then Canada, with 11 and 8, respectively *(22)*. The supply of nurses was much lower in Haiti, Jamaica, and Honduras, with fewer than 1 nurse per 1000 *(14, 22)*.

In terms of hospital care, the average number of hospital beds available in the Americas was 2.1 per 1000 population, fewer than the OECD average of 4.7 *(14)*. The countries and territories with better availability of hospital beds in the Region were Guadeloupe, Barbados, and Montserrat, having 5–6 beds per 1000 population. In contrast, Guatemala, Honduras, and Paraguay had less than one hospital bed per 1000 population *(22)*. These significant disparities between countries reflect the considerable differences in investments in hospital infrastructure across the countries in the Americas *(14)*.

Mental health infrastructure plays an essential role in the healthcare resources in the Region, with the total cost of mental ill health estimated at 3.5–4% of GDP in OECD countries, including those in the Americas *(14)*. Still, in most of the LAC region, appropriate mental health care for people with mental illness is deficient. The number of psychiatrists is low in all countries, except Argentina and Uruguay, which have more than 10 psychiatrists per 100 000 population. There is also an uneven distribution across the Region, with countries like Mexico having 60% of all psychiatrists based in the three largest cities *(14)*. In addition, LAC is the region with the most prolonged stays in mental health institutions compared with other WHO regions, and a disproportionate number of psychiatric beds in mental health institutions (4.3 per 100 000) compared to other inpatient services (1 per 100 000), suggesting a lack of investment in mental health care with resulting consequences in terms of disability and unemployment *(14, 27)*.

Health expenditure and financing

Even though health spending in recent years has exceeded economic growth in several LAC countries, increasing the share of the economy destinated to health care, the Region is still facing some challenges: unequal access and distribution of health services, large informal economies, and high out-of-pocket (OOP) expenditure *(14, 18)*. In countries like Colombia and Peru, where the health system is partially financed via taxation, informal economies make it challenging to fund the health systems, leading to issues in access and the quality of health services *(18)*.

Between 2005 and 2015, public health expenditure as a proportion of GDP increased in all the LAC regions, although it remained low (3.5% of GDP) compared to the average in OECD countries (6.6% of GDP), being more dependent on private spending *(14, 18)*. By 2015, Cuba and Uruguay had achieved the PAHO recommendation of spending 6% of GDP on public health expenditure, Ecuador had experienced the most significant increase, and the Bolivarian Republic of Venezuela the largest decrease *(18, 22)*. During the same period, private health expenditure increased across all countries, except in Mexico, Argentina, Costa Rica, and Uruguay, with the latter three experiencing the most significant increases in public health expenditure, indicating a negative relationship between public and private health expenditure as a proportion of GDP *(18)*.

By 2017, government and compulsory health insurance represented an average of 54.3% of the current expenditure on health in LAC, with the remainder being covered by voluntary private insurance and OOP expenditures by households *(14)*. OOP expenditure was 34% by 2017, well above the WHO target of 21%, and increased notably in Colombia, Ecuador, Panama, and Peru from 2005 to 2017 *(14, 18)*.

It is essential to clarify that high OOP expenditure enables catastrophic health expenditures and impoverishment for the population without social or public health insurance, making it harder to achieve the UHC target *(26, 27)*.

As high OOP expenditure (OOP payments over 10% and 25% of household income) on health can lead people into financial hardship, 1.7% of the population in 15 LAC countries has been pushed below the poverty line due to high OOP expenditures *(14)*. Nicaragua (>5%), Haiti (3.3%), Chile (2.6%), and Ecuador (2.4%) are the countries with the highest levels of poverty due to OOP expenditure, in contrast with countries such as the Bahamas, Honduras, and El Salvador, where less than 0.5% of the population falls into poverty due to OOP expenditures (Annex Table 6) *(14)*.

Annex Table 6. Health expenditure and financing per country and territory in the Region (latest indicator reported to PAHO/WHO up to 2022)

SUBREGION	PUBLIC HEALTH EXPENDITURE AS % OF GDP	PRIVATE HEALTH EXPENDITURE AS % OF GDP	OUT-OF-POCKET EXPENDITURE AS % OF TOTAL HEALTH EXPENDITURE
North America			
Bermuda			
Canada	7.6	3.2	14.9
Mexico	2.7	2.8	42.1
Puerto Rico			
United States of America	8.5	8.2	11.3
Central America			
Belize	4.2	1.6	21.8
Costa Rica	5.3	2.0	22.3
Cuba	9.9	1.2	10.9
Dominican Republic	2.7	3.2	42.9
El Salvador	4.7	3.8	36.5
Guatemala	2.4	3.8	56.0
Honduras	2.9	4.2	52.6
Nicaragua	5.1	3.1	34.4
Panama	5.0	2.6	27.6
Latin Caribbean			
French Guiana			
Guadeloupe			
Haiti	0.5	2.3	43.3
Martinique			

(Continued)

SUBREGION	PUBLIC HEALTH EXPENDITURE AS % OF GDP	PRIVATE HEALTH EXPENDITURE AS % OF GDP	OUT-OF-POCKET EXPENDITURE AS % OF TOTAL HEALTH EXPENDITURE
Andean Area			
Bolivia (Plurinational State of)	4.9	1.9	23.9
Colombia	5.5	2.2	14.9
Ecuador	4.8	3.0	30.9
Peru	3.3	1.9	28.1
Venezuela (Bolivarian Republic of)	2.5	2.9	18.5
Southern Cone			
Argentina	5.9	3.6	27.7
Brazil	3.9	5.7	24.9
Chile	4.8	4.6	32.8
Paraguay	3.3	3.9	41.6
Uruguay	6.2	3.1	15.5
Non-Latin Caribbean			
Anguilla			
Antigua and Barbuda	2.6	1.8	24.3
Aruba			
Bahamas	3.0	2.7	26.2
Barbados	2.8	3.4	46.7
Cayman Islands			
Curaçao			
Dominica	3.5	1.9	33.9
Grenada	2.1	2.9	54.4
Guyana	2.9	1.9	34.8
Jamaica	4.0	2.0	16.4
Montserrat			
Saint Kitts and Nevis	2.7	2.7	46.4
Saint Lucia	2.1	2.2	46.3
Saint Vincent and the Grenadines	3.2	1.5	29.1
Sint Maarten (Dutch part)			
Suriname	7.0	2.7	16.1
Trinidad and Tobago	3.2	3.8	46.9
Turks and Caicos Islands			
Virgin Islands (UK)			

Source: PAHO Core Indicators Portal.

Inequity and inequality in health in the Region of the Americas

As noted above, despite the significant advances in health status that the Region of the Americas has made over the last decades, which mean that people live longer and healthier lives than before, these advances have been uneven, leaving millions of people living with vast socioeconomic and health inequalities *(26, 28)*. Manifest differences among and within countries in their access to health services, segmentation in the quality of these services, and health outcomes are evidence of the health inequalities in the Region *(28)*.

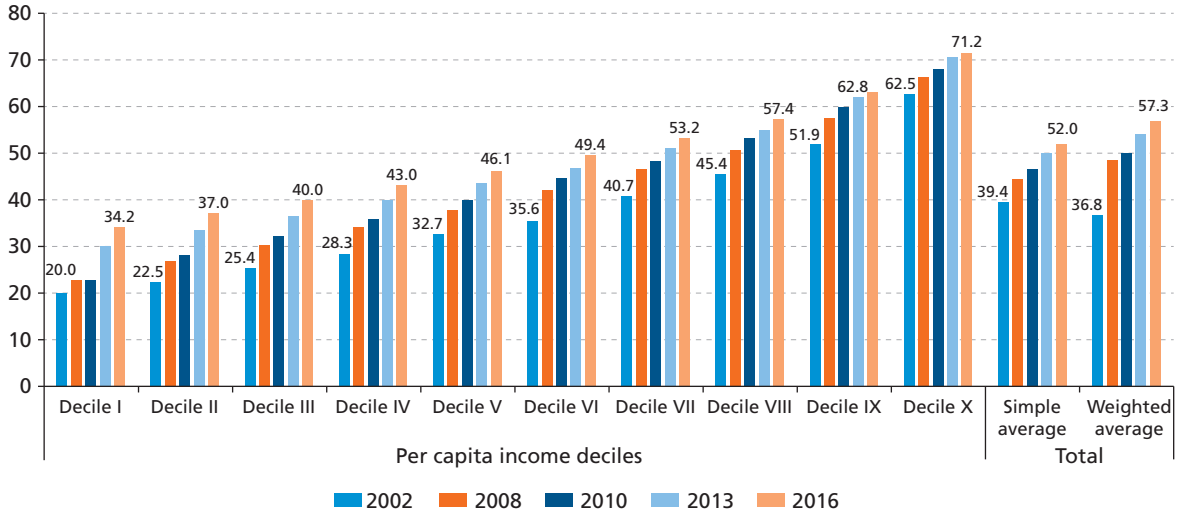
The wide gap in infant mortality, for example, is a strong indicator of health inequality in the Region. The high mortality rates affecting Indigenous and Afro-descendant children due to communicable and deficiency diseases (pneumonia, intestinal infections, and malnutrition) and the marked differences in life expectancy among Indigenous and Afro-descendant populations in comparison with White populations evidence the gap in terms of income, access to, and quality of health services *(28)*. For example, in countries like the Plurinational State of Bolivia, Colombia, and Nicaragua, the infant mortality rates were three to four times higher in the poorest quintile than in the wealthiest quintile *(29)*.

Health inequality can also be seen in the access to, and quality of, health services. While affiliation and coverage of health systems have been rising since the early 2000s, and the improvement in countries' GDP has decreased socioeconomic gaps, more equitable access to and increased quality of services have not been achieved. Increasing the coverage and the affiliation to health systems does not guarantee adequate access or better quality of health services, which are limited by economic barriers in the form of co-payments *(28)*. Even with the increase in the affiliation to health systems in 14 countries in the Americas, a difference of 37 percentage points remains between the lowest and the highest income deciles (Annex Figure 2A) *(16, 28)*. The affiliation in 2019 and 2020 decreased for all ages, sex, residential areas (both rural and urban), and decile (Annex Figure 2B).

Health inequalities reduce capacities and opportunities in the economic sphere and reflect a violation of the right to health *(28)*. Populations with good health have better physical and mental activities, improving their work and educational status and, therefore, increasing the chances of addressing poverty and scarcity, and reducing inequalities *(28)*. Guaranteeing the right to health and reducing socioeconomic and health gaps are fundamental for economic growth and sustainable development *(28)*.

Annex Figure 2. A. Latin America (14 countries): affiliation or contribution to health systems by employed persons aged 15 and over, by income deciles, national totals, 2002–2016 (percentage). B. Latin America (13 countries): affiliation or contribution to pension systems among employed persons aged 15 and over, by sex, area of residence, age group, and income decile. 2010, 2014, 2019, and 2020 (percentages)

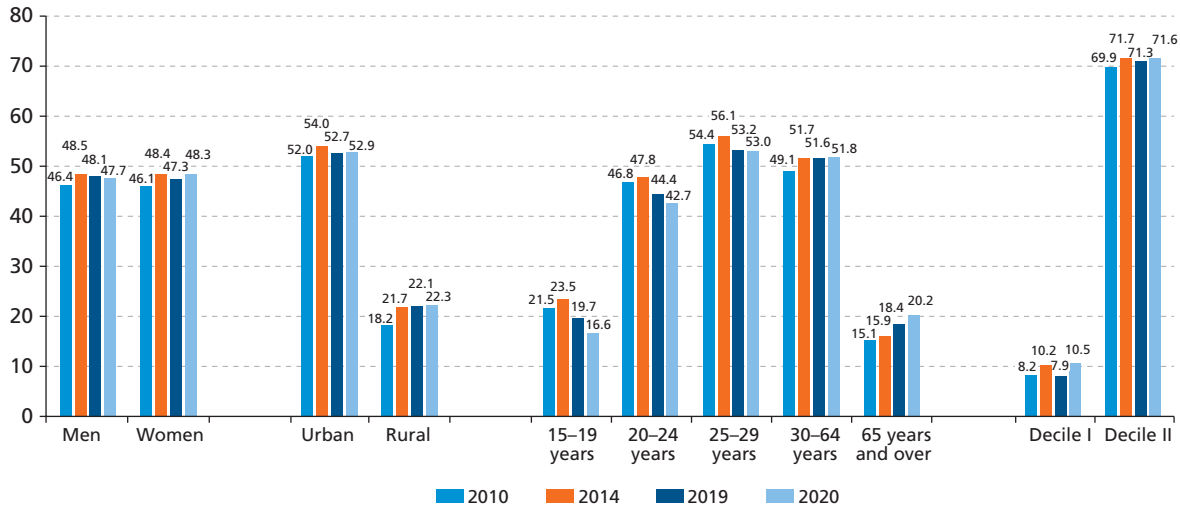
A



Notes: a) In Argentina, the graph represents wage earners aged 15 or older. The data for Mexico in 2016 are not strictly comparable to those of previous years owing to changes in the wording of some of the questions on social security access. Further details of these changes, their effects on the estimation of social security coverage (health and pensions), and procedures to adjust the estimation, are provided in: CONEVAL (National Council for the Evaluation of Social Development Policy). Nota técnica 2: ejercicio de adecuación histórica de la carencia por acceso a la seguridad social 2016 a la serie 2010-2014. Mexico City: CONEVAL; 2017. b) Simple average of the countries by deciles. The countries included are: Argentina (urban areas), Bolivia (Plurinational State of), Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Paraguay, Peru, and Uruguay (urban areas).

Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on Household Survey Data Bank (BADEHOG) in Social Panorama of Latin America 2018. Santiago: ECLAC; 2019.

B



Source: a) The average by area only includes information for rural areas, thus it excludes Argentina. b) Weighted average for: Argentina (urban areas), Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Mexico, Paraguay, Peru, and Uruguay. In Argentina and the Dominican Republic, only the contribution or affiliation to pension systems of wage earners in the years considered is recorded. c) Measured by affiliation to pension systems in Bolivia (Plurinational State of), Dominican Republic, Ecuador, and El Salvador, whereas the other countries report contributions to these systems or related variables.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Household Survey Data Bank (BADEHOG) in Social Panorama of Latin America 2021. Santiago: ECLAC; 2022.

Infectious diseases outbreaks in the Americas prior to COVID-19

The Region of the Americas presents an extensive microbial diversity, making it endemic for many infectious agents, including dengue, chikungunya, malaria, and TB *(30)*. Whereas the health systems in the Region are trying to adapt to the epidemiological transition, endemic diseases remain an ongoing burden on the healthcare infrastructure, either acting as recurring infections or as major epidemics spreading rapidly throughout the Region *(30)*. These diseases bring major consequences in terms of morbidity and mortality, increasing the burden on the already overburdened health systems *(30)*. The high variability in terms of healthcare infrastructure, diverse environment, and socioeconomic gaps limit surveillance capacity, especially in remote areas and for populations in vulnerable situations, increasing the risk of endemic, emerging, and reemerging diseases *(30)*.

Dengue

Dengue fever, a viral disease transmitted by the *Aedes aegypti* mosquito, is widely distributed in the Americas *(31)*. Dengue epidemics have recurred in 3-to-5-year cycles, with a severe regional epidemic in 2013 of 2 million cases and an incidence of 430.8 per 100 000 population, 37 692 severe cases, and 1280 deaths *(30, 31)*.

There has been a progressive increase in reported dengue cases in the Region, especially in the southern part of the Americas. In 2019, 2 263 630 cases were reported (a 5-fold increase in the cases compared with the previous year) and 849 deaths (case fatality rate 0.03%), showing a worrying 7-fold increase in comparison with 2018 *(32)*. In contrast, most of the severe dengue cases during 2018 were reported in the Central Isthmus and Mexico *(32)*. The risk of outbreaks and severe dengue fever cases is linked to the simultaneous presence of two or more dengue serotypes, a situation reported in 15 countries and territories in the Region *(33)*.

Zika

The 2015 Zika epidemic is a clear example of the potential for diseases to rapidly spread from the LAC region *(31)*. After the first report of Zika cases in Brazil in March 2015, the virus spread within 18 months across South America and Central America, the Caribbean, Florida (United States), and Texas (United States) *(30)*. Since then, Zika cases have continued emerging, with 907 480 cases reported from 2015 to the first months of 2022 *(34)*.

As Zika cases are mainly detected due to passive surveillance, there are some challenges in detecting the Zika virus: the high proportion of asymptomatic persons, lack of specificity in the clinical presentation, and the complex laboratory diagnosis in a context of cocirculation of related viruses *(34)*. These challenges make it harder to interrupt the virus circulation and local transmission, delaying control of the virus spreading and the emergence of cases of congenital complications of Zika virus, the first of which was reported on 25 October 2015 *(34, 35)*.

Chikungunya

The first case of chikungunya (a word in the African Makonde language that means "bent over in pain") in the Americas, a viral disease transmitted by the mosquitoes *Aedes aegypti* and *Aedes albopictus*, was reported in December 2013 *(36)*. By June 2014, the Latin Caribbean region was the most affected, with 191 251 new cases *(36)*. Since then, the virus has spread across most of the Americas, with 3 288 852 cases reported between 2013 and the first months of 2022, mainly in Brazil, the Dominican Republic, and Colombia *(36)*.

Yellow fever

Yellow fever is an endemic disease in 13 countries in the Americas, especially in Central America and South America *(37)*. To prevent this infection, countries rely on a highly effective, safe, and affordable vaccine that provides lifelong protection with a single dose *(37)*. Despite effective vaccination and control measures, there has been an increase in yellow fever in South America since 2015, with an upsurge of cases, especially in Brazil, spreading to areas not previously deemed to be at risk of yellow fever transmission *(38, 39)*. In 2018 alone, Brazil accounted for 99% of the yellow fever cases in the Americas, a pattern that continues to the present *(38)*.

Measles

Measles is considered the fifth disease that must be eliminated from the Americas, together with smallpox (eliminated in 1971), polio (1994), rubella, and congenital rubella syndrome (2015). It is a preventable disease through vaccination, and there are surveillance and elimination strategies led by PAHO. Still, due to political and societal changes, measles cases are rising. Since mid-2017, the Bolivarian Republic of Venezuela has been suffering a nationwide measles outbreak, with 7054 cases confirmed between 2017 and 2019 *(33, 39*). In the same period, Argentina, Brazil, Chile, Colombia, Ecuador, and Peru presented confirmed cases of measles imported from the Bolivarian Republic of Venezuela, with a steady decrease in the cases since mid-2018 in the counties experiencing the most significant outbreaks, but a spread toward other countries such as the Bahamas, Canada, Chile, Costa Rica, Mexico, and the United States *(33)*.

Diphtheria

Diphtheria, a bacterial disease preventable through vaccination, has presented outbreaks in Haiti and the Bolivarian Republic of Venezuela over the past 10 years. The outbreak in Haiti began in 2014, with a total of 1128 confirmed and probable cases, including 52 deaths (5% case fatality rate), reported by the national health authorities in June 2019 *(33)*. The Venezuelan outbreak began in July 2016, with 2900 confirmed and probable cases by June 2019, including 286 deaths (10% case fatality rate). It spread to Colombia, with eight laboratory-confirmed cases (including three deaths) in 2018 *(33)*.

Malaria

Although, in 2018, the Americas presented 765 000 cases of malaria, a preventable and curable parasitic disease, the Bolivarian Republic of Venezuela was the only country in the Region with an increase of 800% in malaria cases during the 2010–2018 period *(33, 40)*. In 2017, the Bolivarian Republic of Venezuela accounted for the 84% increase in cases in the Region, with 525 897 confirmed cases, 522 059 confirmed cases in 2018, and 492 753 confirmed cases in 2019 *(33, 40)*.

Influenza H1N1

Over the past decades, sporadic cases of severe influenza and deaths in humans have been caused by several avian influenza A viruses. The influenza A (H1N1) strain, which was first detected in North America in 2009, prompted the first activation of provisions under the 2005 IHR, which went into effect in 2007. Deliberations that led to the 2005 IHR revisions were shaped by experience in the SARS outbreak of 2003. The regulations delineate individual countries' responsibilities and the WHO leadership role in declaring and managing a PHEIC. The 2009 H1N1 pandemic presented a public health emergency of uncertain scope, duration, and effect. The experience exposed the strengths of the newly implemented IHR as well as a number of deficiencies and defects. Key lessons learned from the response to the H1N1 pandemic (e.g., vaccine protocols sharing, scientific understanding, disease detection, surveillance, and laboratory capacity) can be of relevance to assessing the response to the COVID-19 pandemic.

Infectious disease outbreaks in the Americas prior to COVID-19

In addition, in 2022, the Region had an outbreak of mpox and a polio outbreak risk. Between 1 January and 7 July 2022, a total of 7892 confirmed cases of mpox were reported from 63 Member States in five WHO regions. Mpox is a viral zoonotic disease caused by the monkeypox virus. Mpox is a disease of global public health importance.

On 26 October 2022, there were 49 935 confirmed cases of mpox, and a total of 16 deaths were reported in the Americas *(41)*. During the first week of July, there was an increase of 41.6% in reported cases globally (57% in the Region of the Americas). The United States and Brazil have the highest number of confirmed cases until now, standing at 27 809 and 9026, respectively.

Also, on 21 July 2022, the New York State Department of Health in the United States reported the identification of a case of paralytic polio. The vaccination rate with all three doses of the polio vaccine stood at 82% in 2020, the lowest since 1994 when the Americas were certified free of the disease. Considering this, PAHO has called on countries to strengthen surveillance and routine vaccination campaigns urgently *(42)*.

International Health Regulations

The 2005 International Health Regulations (IHR) were adopted by the 58th World Health Assembly in 2005, becoming the legal framework "to prevent, protect against, control and provide a public health response to the international spread of diseases" *(33, 43, 44)*. The 35 States Parties in the Region are signatories to the IHR, submitting an annual confirmation of their capacities and self-assessment in following the IHR *(33, 45)*.

The IHR provides the foundations for the global architecture for prevention, detection, and containment of public health risks and emergencies. It appeals for the development of core national capacities (to prevent and prepare), the ability to detect and contain risk threats in focus, and requires that WHO, including regional offices, coordinate and execute the global alert and response systems *(46)*.

PAHO is the WHO IHR contact point for the Region of the Americas and facilitates the management of public health events with the National IHR Focal Points (NFPs). In 2018, all 35 States Parties in the Region submitted the annual confirmation or update of contact information for their NFPs, along with an updated list of national users of the secure WHO Event Information Site for National IHR Focal Points. In 2018, routine tests of connectivity, by email and telephone, between the WHO IHR Contact Point and the NFPs in the Region were successful for 33 of the 35 States Parties (94%) *(34)*.

In the period between 1 July 2018 and 30 June 2019, 153 acute public health events of potential international concern were identified and assessed in the Americas, representing 30% of the events reported globally in the same period *(44)*. Of these 153 events, 72 were attributed to infectious hazards, including antimicrobial-resistant agents (9 events), dengue fever (9 events), and measles (9 events) *(34)*.

Regarding the core capacities of States Parties, in 2019, 33 (94%) of the 35 States Parties submitted their annual reports to the 72nd World Health Assembly; 11 States Parties have compiled every year: Antigua and Barbuda, Canada, Colombia, Costa Rica, Dominica, Ecuador, Guyana, Honduras, Jamaica, Mexico, and the United States. These States Parties Annual Reports submitted to the World Health Assemblies between 2011 and 2018 showed steady improvements or plateauing of the average regional scores for all core capacities. In 2019, the introduction of a revised tool entailed a redefinition of the 13 core capacities. For all 13 core capacities, the average regional scores are close to 60%, with the lowest average scores (54%) for radiation emergencies, and the highest average score (76%) for IHR coordination and NFP functions. Except for the core capacity related to health service provision, the average regional scores for the Americas are above the global averages. The status of the core capacities across subregions is heterogeneous; the highest average

subregional scores for all core capacities are consistently observed for North America, while the lowest average scores are in the Caribbean subregion *(34)*.

The IHR are not only a governance tool to prevent and control potential outbreaks. The outbreaks of dengue, chikungunya, and Zika virus are examples where health events can also benefit from solid preparedness efforts across the Region, including the mitigation of the economic impact of such health events *(45)*. The cost of dengue illness in the Americas has been estimated at USD 2.1 billion per year. The chikungunya outbreak in Reunion Island incurred medical expenses of almost EUR 44 million, of which 60% were attributable to direct medical costs *(45)*.

2.2. COVID-19 and direct impact on health

COVID-19 spread in the Americas

In December 2019, the Wuhan Municipal Health Commission reported an outbreak of respiratory disease (COVID-19) caused by a novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) linked to the Huanan Seafood Market (Wuhan City, Hubei Province, China) *(47)*. The virus rapidly spread to other countries as it easily propagates among humans via respiratory droplets, onset of symptoms occurs 2–3 days after infection, some carriers are asymptomatic, and international travel is common. In the Americas, the first COVID-19 case was confirmed in the United States on 20 January 2020, followed by a case in Brazil on 26 February 2020, and the first death was reported in Argentina on 7 March 2020. SARS-CoV-2 kept spreading globally, and on 12 March 2020, WHO declared the COVID-19 pandemic *(48)*.

To control the virus transmission, governments followed different response strategies. These included mandatory restrictions (such as travel restrictions, school closures, lockdowns, quarantines, or curfews), promotion of behavioral changes (e.g., social distancing, use of masks, and frequent handwashing), surveillance, and real-time monitoring of the contagions (e.g., massive testing to identify positive cases, isolation of infected cases, and tracing and quarantine of the contacts of infected cases). The differing adherence to those measures, combined with the particularities of the different health system capacities, economies, political leadership, demographics, and social and cultural characteristics, shaped the impact of the pandemic in the different countries and territories.

In the Americas, governments could anticipate the pandemic and impose strict lockdowns when the number of cases was still low. However, those measures were insufficient to effectively stop the infection wave. The high density of the megacities, informal labor markets, cultural norms (characterized by close personal relations), limited testing and tracing of cases, lack of state capacity, and, most of all, the high levels of inequity and poverty impaired the containment and mitigation efforts. As the disease disseminated, poorly prepared health systems failed to cope, and both the virus and the measures to contain it severely impacted the population's health.

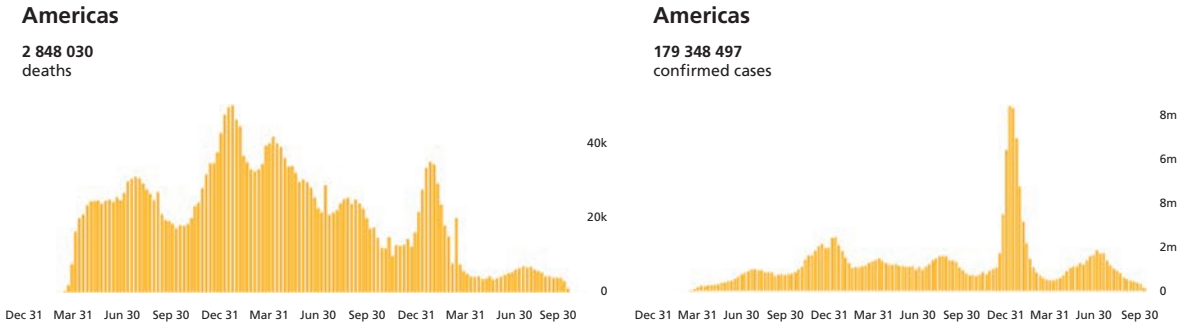
SARS-CoV-2 infection waves and variants

Globally, SARS-CoV-2 has caused successive infection waves while it has evolved into new variants. WHO has classified the variants as variants of concern (VOC) and variants of interest (VOI) according to their transmissibility, virulence, and response to the control measures, and named them with letters of the Greek alphabet *(49)*. Over 100 SARS-CoV-2 variants have been identified by genomic sequencing and five of them have been identified as VOC: Alpha, Beta, Delta, Gamma, and, more recently, Omicron. In the Americas, Alpha, Gamma, Lambda (VOI), Mu (VOI), Delta, and Omicron have caused most of the infection waves, with Omicron being the most contagious. Omicron was first detected by mid-November 2021 in different countries, reached the Americas by the end of November 2021, and caused the highest number of cases in Europe, Southeast Asia, and the Americas. Omicron is the current circulating variant worldwide, and the other VOC have declined significantly over time but may still be circulating below detection levels.

Additional mutations drove the emergence of five sublineages of Omicron classified as BA.1 (including BA.1.1), BA.2, BA.3, BA.4, and BA.5. Although BA.2 is predominant in most of the regions at the global level (Africa, Asia, Europe, and Oceania), in the Americas the sublineages BA.1 and BA.1.1 are still predominant. They have been identified in more than 97% of the characterized samples. However, the proportion of BA.2 has been increasing in all subregions. Countries that experienced more substantial BA.2 waves appear to have fewer cases due to BA.4, BA.5, and BA.2.12.1 at this stage *(50)*. The vaccination coverage per country is also likely to influence the impact of these emerging Omicron-descendent lineages. Regardless of these additional mutations, Omicron sublineages are like Omicron in terms of transmissibility and public health impact *(51)*.

Initial waves correlated with a higher death toll, but since the start of the COVID-19 vaccination campaign worldwide in December 2020, mortality has decreased gradually as vaccination coverage increased (Annex Figures 3–6). However, despite these vaccination efforts, the high number of cases caused by Omicron has had a severe impact on mortality (Annex Figure 3).

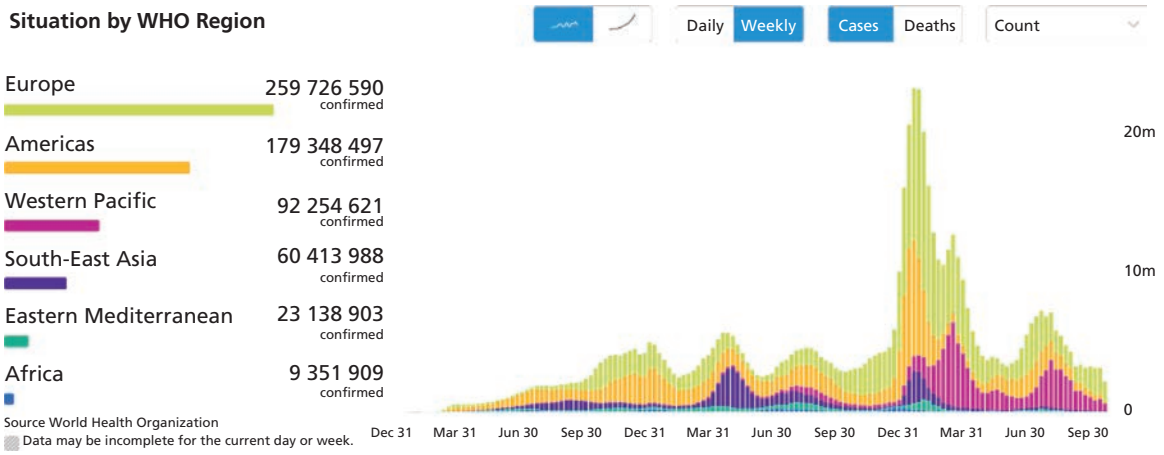
Annex Figure 3. COVID-19 weekly confirmed cases in the Americas (right) and COVID-19-related deaths in the Americas (left), from December 2019 to October 2022



Notes: Vaccination campaign started in March 2021 in the Americas.

Source: World Health Organization. WHO COVID-19 Dashboard. Geneva: WHO; 2020. Available from: https://covid19.who.int/.

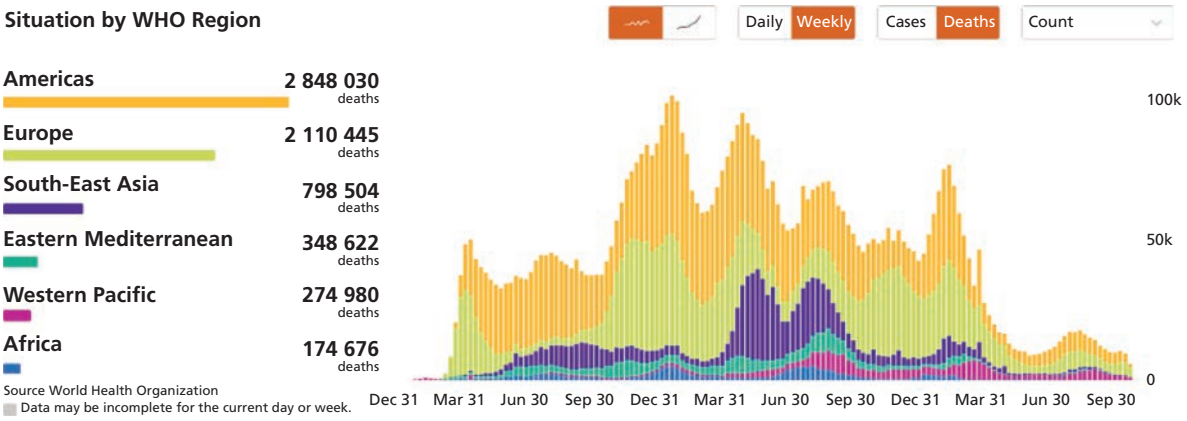
Annex Figure 4. COVID-19 weekly confirmed cases by region, from December 2019 to October 2022



Notes: Vaccination campaign started in March 2021 in the Americas.

Source: World Health Organization. WHO COVID-19 Dashboard. Geneva: WHO; 2020. Available from: https://covid19.who.int/.

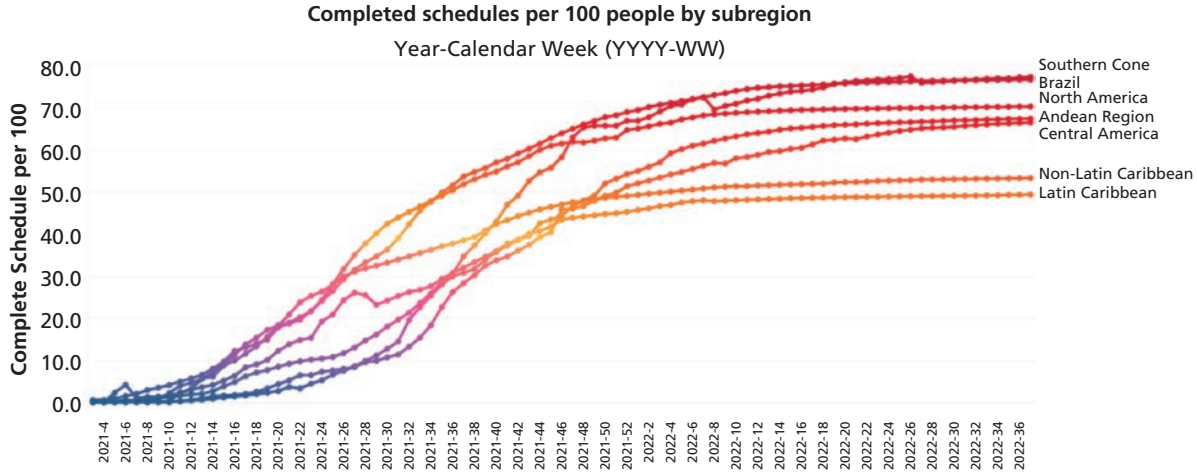
Annex Figure 5. COVID-19-related deaths by region, from December 2019 to October 2022



Notes: Vaccination campaign started in March 2021 in the Americas.

Source: World Health Organization. WHO COVID-19 Dashboard. Geneva: WHO; 2020. Available from: https://covid19.who.int/.

Annex Figure 6. Completed COVID-19 vaccination schedules per 100 people by area of the Americas



Source: Pan American Health Organization. COVID-19 vaccination in the Americas (dashboard). Washington, D.C.: PAHO; 2023. Available from: https://ais.paho.org/imm/IM_DosisAdmin-Vacunacion.asp.

Vaccination rollout in the Americas

The development and distribution of safe and effective vaccines have contributed to containing the SARS-CoV-2 pandemic. Several vaccines have been generated using different platforms and following diverse administration schedules. Currently, 38 COVID-19 vaccines have been approved *(52)*, 156 are in clinical development, and 198 are in preclinical development *(53)*.

To address global vaccine availability, the Coalition for Epidemic Preparedness Innovations (CEPI), Gavi, and WHO, alongside key delivery partner the United Nations Children's Fund (UNICEF), in April 2020 launched COVAX (COVID-19 Vaccines Global Access), the vaccines pillar of the Access to COVID-19

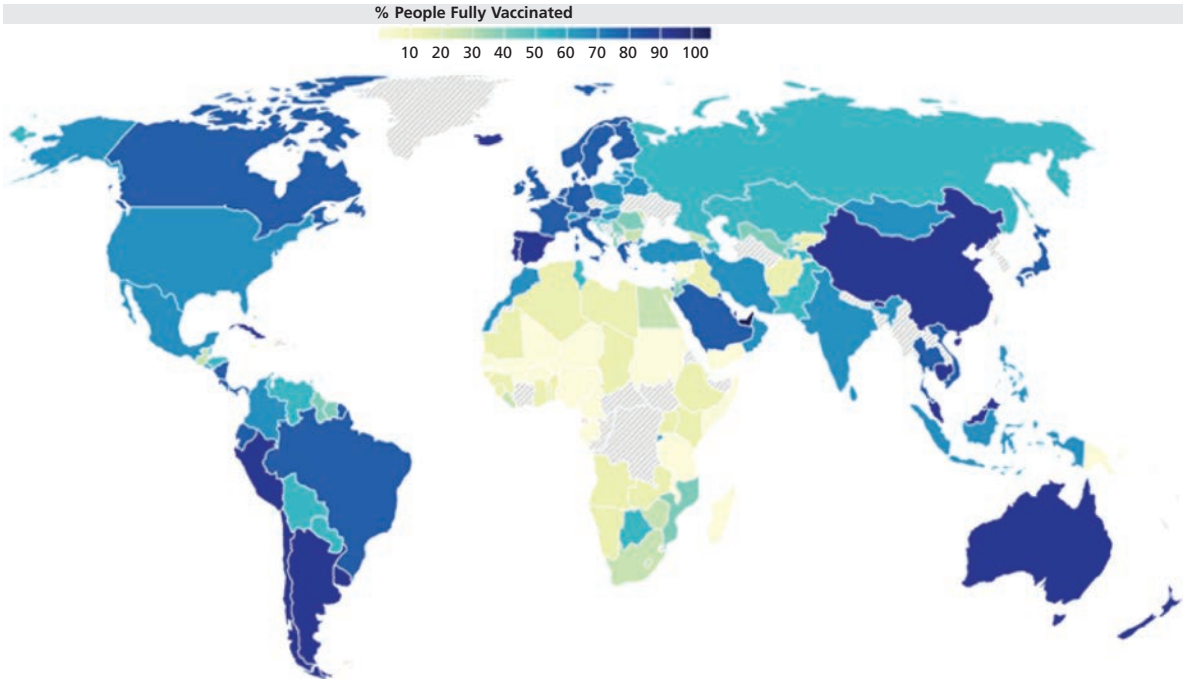
Tools (ACT) Accelerator. Its aim is to accelerate the development and manufacture of COVID-19 vaccines and to guarantee fair and equitable access for every country in the world.

In the past, the Americas successfully implemented massive vaccination campaigns. As a result, it was the first region in the world to eliminate rubella, congenital rubella syndrome, and measles, and the first to eradicate smallpox and be declared polio-free. COVAX doses arrived in Latin America in the first week of March 2021, only two months after high-income countries received and administered the first COVID-19 vaccine. The Southern Cone and Brazil led the vaccination campaign throughout 2022, and with North America trailing just behind. At the current stage of the campaign, vaccination coverage in the whole region is above 60%, except for Paraguay (55.6%), Guatemala (49.3%), and Suriname (45.7%). Chile, Argentina, Nicaragua, and Cuba now have the highest vaccination coverage *(54)*. In the Americas, 68.7% of people have been fully vaccinated with the last dose of the primary series (61.45% of people have been vaccinated globally); and 35% have received a booster dose as of June 2022 (Annex Figures 6 and 7) *(54)*. The most frequently distributed vaccines are the ones produced by Pfizer, Moderna, CoronaVac, and AstraZeneca.

COVID-19 mortality and morbidity

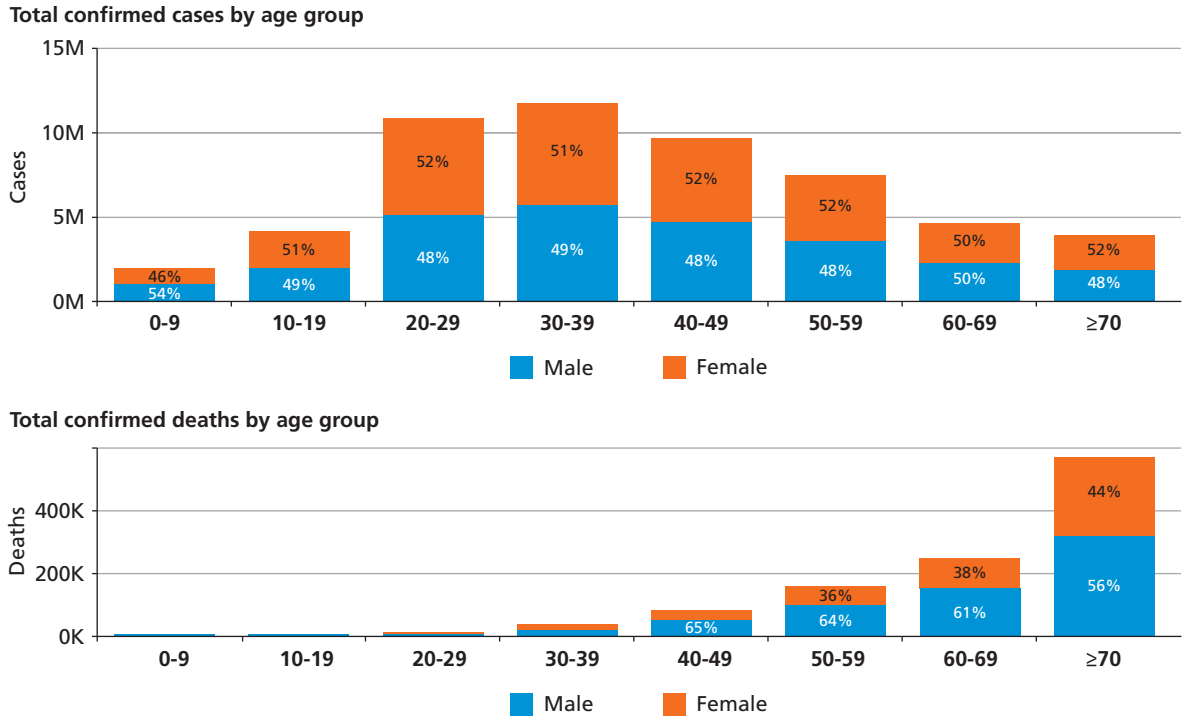
The Americas is one of the regions most affected by COVID-19. As of 25 October 2022, COVID-19 had infected over 624 235 272 people and caused 6 555 270 deaths worldwide *(55, 56)*. Of these, 28.7% of the infected cases (179 348 497 persons) and 43.4% of deaths (2 848 030 persons) occurred in the Americas. Since the start of the pandemic, four American countries (United States, Brazil, Mexico, and Peru) have been among the top 10 countries with the highest COVID-19-related death rate. The countries with the highest number of cumulative cases in the region are the United States (53.2% of all cases), Brazil (19.3%), and Argentina (5.38%). Most of the deaths occurred in the United States (36.92%), Brazil (23.96%), and Mexico (11.51%). As reported by Amnesty International, the reasons behind the devastating impact of the pandemic

Annex Figure 7. Percentage of people fully vaccinated by October 2022



Source: Johns Hopkins University. Map and trends: Mortality analyses. Bethesda: Johns Hopkins University; 2022 [cited 19 December 2022]. Available from: https://coronavirus.jhu.edu/data/mortality.

Annex Figure 8. Confirmed COVID-19 cases and deaths by age and sex in the Americas (cumulative data since the start of the pandemic)



Source: Pan American Health Organization. COVID-19 vaccination in the Americas (dashboard). Washington, D.C.: PAHO; 2023. Available from: https://ais.paho.org/.

in the Region are the persistent social inequities and low investment in public health and social protection, as well as the lack of measures implemented to protect those most vulnerable *(57)*.

In the Region, as in the rest of the world, most of the COVID-19 cases were identified among the population aged 20–60 years, but most of the disease burden was carried by the aged population, as the case fatality rate was higher among adults above 70 years of age (Annex Figure 8). This is mainly because underlying comorbidities increase with age (30% of adults above 70 present comorbidities in the Americas), and the presence of comorbidities is a risk factor for developing severe COVID-19 outcomes. Among COVID-19 cases, the most frequent comorbidities identified were cardiac conditions, followed by diabetes. Among all cases reported in the Americas, 9% were admitted to the hospital, 2% received care in intensive care units (ICU), and 2% required ventilation support *(58)*.

Disruptions of regular and essential health services

Health systems and health workers were under enormous stress during the pandemic and were not prepared for a prolonged crisis *(59)*. Consequently, regular and essential health services were disrupted, aggravating the health crisis beyond COVID-19 cases. The latest survey on continuity of essential health services reported that the Americas has the highest average percentage of service disruptions (55% in 27 countries versus 28% in 23 countries in the European region) and the highest disruption in primary care services (70%, n = 18 countries *[5]*). The main causes of these disruptions were intentional service delivery modifications and the lack of healthcare resources (supply chain disruption, and lack of personnel and facilities). These disruptions are of concern not only for primary care but also for other service delivery settings, as a lack of access to primary care can often result in greater pressures and reliance on other services, such as emergency care.

Specifically, for the period from January to March 2021, a regional survey identified the Americas as the region with the highest proportion of reported disruption of services related to mental health, neurological and substance use disorder (60% average disruption across countries), immunization (55%), communicable disease (49%, such as HIV, tuberculosis, and malaria), and services related to reproductive, maternal, newborn, and child and adolescent health and nutrition (41%). While not leading the interregional comparison, the Americas also presented other highly disrupted services related to NCDs (especially diabetes and hypertension) (41%) and neglected infectious diseases (47%) *(60)*.

Despite mass COVID-19 vaccination efforts leading to 718 862 834 people being fully vaccinated in the Americas by October 2022 (76% of North America's population and 65% of South America's population), the limitations of health services affected regular immunization programs, and 2.5 million children did not receive their scheduled vaccines in 2020. Vaccine coverage rates against polio, measles, mumps, rubella, diphtheria, tetanus, and pertussis decreased below the 95% recommended by PAHO to prevent outbreaks, setting back decades of vaccination progress *(61)*.

The high pressure on the health system had a negative impact on the quality of life of healthcare professionals and other essential workers on the front line of the pandemic response (medical technicians, doctors and nurses, border and quarantine staff, midwives and community workers, food suppliers, and cleaners) *(62)*. A systematic review including mainly articles from Brazil and the United States identified that the quality of life of health personnel dropped during the pandemic because of stress, anxiety, fatigue, and stigmatization for fear of contagion and resulting social isolation. To develop strategies to reduce absenteeism and improve mental health and resilience in a future health crisis, further studies are required to capture the impact of COVID-19 on the quality of healthcare providers in different settings *(62)*.

Disrupted supply chain: health and nutritional impact

Mobility restrictions to contain disease-spreading caused severe disruptions in supply chains, affecting the provision of medical supplies and food.

Efficient supply chain systems are key to ensuring that health products are available and delivered in a timely manner, and that quality health services can be provided. By the end of 2021, 67% of countries in the Americas had reported disruptions to supply chain systems, limiting capacities across the continuum of care (27% more than in the first quartile of 2021) *(5)*.

The disruption also affected the distribution, availability, and access to food, and generated an increase in prices and decrease in access to healthy food and state food programs. Food insecurity in LAC affected 75.7% (n = 1 016 841) of the population, with the Bolivarian Republic of Venezuela, Nicaragua, and Haiti showing the highest prevalence of hunger (90.8%, 86.7%, and 85.5%, respectively). Presenting COVID-19 symptoms, being a female or a nonbinary person, living in a town, being afraid of the virus infection, and having a mental health condition (depression or anxiety) correlated with a higher prevalence of food insecurity, while being older was associated with less food insecurity *(63)*.

Exacerbation of health inequities

The pandemic spread unequally across the Region and populations, exacerbating social, economic, and health-related disparities, disproportionately affecting the poorest, marginalized ethnicities, women and girls, children, and people with disabilities *(59)*.

Studies from Latin America described increased COVID-19 incidence and mortality among those with low socioeconomic status *(64)*. Higher COVID-19 infection rates also correlated with the habitual circumstances

of those with limited incomes: overcrowding, using public transport, living in slums or megacities (such as Bogotá, Buenos Aires, Lima, Mexico, Rio de Janeiro, or Sao Paulo), having limited access to clean water, traveling by boat, and generating incomes through informal work *(65, 66)*. Additionally, those with less social protection were more likely to have preexisting health conditions (obesity, NCDs), predisposing them to severe COVID-19 outcomes *(64)*.

COVID-19 had a higher impact on ethnic groups who face discrimination and experience barriers to accessing comprehensive health care. In the United States, Hispanic and Black people presented higher rates of infection and 3–6-fold higher mortality than White people *(67)*. The risk of dying from COVID-19 is also higher among Indigenous peoples and those receiving subsidized health insurance *(64)*.

COVID-19 effects on women

Even though the number of COVID-19 cases between women and men was similar, and women are overall less likely to develop severe COVID-19 disease than men, the consequences of the COVID-19 pandemic disproportionately impacted women's quality of life in the Americas *(64)*.

Compared to men, women were more likely to be diagnosed later and lack adequate care, as their earlier mortality suggests. Women were also more exposed to the virus, due to the female cultural role as main caregivers *(68)* and because they comprise most healthcare workers (72% of all COVID-19 cases among healthcare professionals in the Region). However, they were not included in most of the COVID-19 response structures, thus increasing the equity gap for an effective response.

COVID-19 containment measures increased the risk of hunger and malnutrition among women and girls; school closures have disproportionately affected girls; and the risks of early marriage, adolescent pregnancies, and maternal mortality have increased significantly. The pandemic aggravated maternal mortality and too many did not receive the care they needed in time due to the lack of reproductive health services. Since the pandemic started, more than 365 000 cases of COVID-19 have been reported in pregnant women in the Region, and more than 3000 of them have died. In 2020, the United Nations Population Fund estimated that the number of women without access to family planning services would increase by 11.4%–17.7% unless access to care were reestablished, causing 1.7 million unplanned pregnancies, around 800 000 abortions, 2900 maternal deaths, and 39 000 infant deaths *(69)*.

Lockdowns forced many women to spend more time at home, a place that was unsafe for many. Calls to domestic violence response hotlines increased by 40% in some countries during these periods and dropped sharply in other countries, indicating that women may have faced new barriers to seeking help.

COVID-19 effects on children

Despite both the number of COVID-19 cases among children and the severity of the disease being lower, the consequences of the pandemic heavily affected children's health, nutrition, education, learning, protection, well-being, family finances, and poverty.

A global survey by Save the Children, conducted in September 2020, identified that access to health care or medical supplies was disrupted for 94.8% of the children in LAC and 73% of children in North America, and access to COVID-19 testing was not available for 26.8% of children in LAC and 2.8% in North America.

Anti-COVID-19 measures led to school closures and a lack of access to learning support (teacher contact) and material, which had a devastating impact on children's learning and put the education sector at risk of losing three decades of progress. Only 7.5% of students in LAC and 16.7% in North America received the same

education as before the pandemic. Only 35% of the children in LAC and 41% in North America were able to receive learning support from their parents *(70)*.

Child poverty and hunger increased during the pandemic. In 2020, a survey covering 11 countries in the LAC region conducted by UNICEF and IMPACT Initiatives reported that 46% of households with children and adolescents had savings to cover their basic needs for a maximum of two weeks compared to 34% of households without children. The survey reported that one out of eight families had the financial resources to cover only one day. Half of households with children and adolescents reported having to skip meals, compared to 23% of all households interviewed. Poor nutrition affected most children in the region, as around two-thirds of parents/caregivers reported barriers to accessing meat, dairy products, grains, fruit, and vegetables to provide a diversified diet *(70)*.

When the LAC region entered into a crisis at the beginning of the pandemic, social protection programs were expanded. However, two years after the start of the crisis, governmental support has decreased from 41% to 31%, although the needs of the populations persist *(63)*.

COVID-19 effects on children with disabilities

Children's vulnerability is aggravated in those with disabilities, which includes 10% of the children in the Americas. They have a higher risk of exposure to the virus as they are more likely to live in congregate care and to be unable to practice preventive measures, such as the wearing of masks, handwashing, and physical distancing.

Children with disabilities are less likely to have improved sanitation facilities (18% less likely), improved drinking water (18%), and water and soap (10%) in their households. They have a higher risk of presenting symptoms of an acute respiratory infection (1.7-fold greater risk), fever (1.5-fold), and diarrhea (1.9-fold). This, together with the increased prevalence of underlying comorbidities, aggravates their risk of COVID-19 infections, severe outcomes, and death *(71)*.

In addition, lockdowns might have increased anxiety and depression in this population and exacerbated preexisting mental health conditions, which can worsen in the absence of community support networks. Changes in routine can take a heavy toll on children with disabilities, especially on those with intellectual and/or psychosocial difficulties. Such children may not process the sudden and major life disruption that certain mitigation measures entail. As with women, quarantine constraints and the overall burden faced by families may also place children with disabilities at increased risk of domestic violence. Service reductions and limited healthcare access have major implications for children with disabilities as they might have greater healthcare needs and a higher dependency on community-based services. Lack of access to antenatal care, safe birth, postnatal care, and early diagnosis of newborns significantly affected outcomes for both mother and child, including contributing to developmental disabilities. Also, in an overwhelmed health system, children and adults with disabilities might be discriminated against in triage and receive poorer medical care, resulting in worse health outcomes *(72)*.

COVID-19 effects on adults with disabilities

The health and social effects of the pandemic have increased the vulnerability of adults with disabilities and their families, who were already among the most marginalized before the COVID-19 pandemic.

Despite representing a large part of society (70 million people with disabilities live in LAC *[73]*) there are limited data reporting on their well-being during the health crisis, and a low number of countries explicitly

included them in policies implemented to mitigate the impact of the pandemic, showing that they remain invisible and neglected by health systems *(74)*.

In general, adults with disabilities are poorer and older, present more underlying comorbidities, and live more frequently in overcrowded households, which all increase their risk of COVID-19 infection and severe disease outcomes. Additionally, their higher levels of job insecurity, lower level of education, and lower access to the Internet make them even more vulnerable to adverse labor scenarios caused by the pandemic, contributing to the spiral of poverty *(74)*. As with children with disabilities, physical confinement mitigation measures and the reduction of healthcare services might cause a large impact on the quality of care of adults with disabilities as they require more rehabilitation and healthcare support, more medicines, diapers, assistive devices, and special nutrition. Behavioral changes and social restrictions might have also particularly affected those with mental conditions such as adults with autism spectrum disorder, for whom routines contribute to reducing stress and anxiety. Finally, confinement might have also increased exposure to domestic violence for women with disabilities *(73)*.

COVID-19 effects on Indigenous peoples

The lack of stratified data for the Indigenous peoples and Afro-descendants in Latin America hides the differentiated impact of COVID-19 on these populations. It has been assumed that COVID-19 mortality is higher among Indigenous peoples due to the preexisting inequalities, higher levels of poverty, precarious housing conditions, lower access to drinking water and food, limited access to health services, and the difficulty in accessing reliable and culturally adapted information about vaccines. Colombia and Mexico, and to some degree Chile, are the only countries with stratified data for Indigenous peoples. Data from Mexico show that the mortality rate among Indigenous peoples was 64% higher than for the rest of the population (29.97 deaths among 1000 Indigenous people/week, compared to 18.18 deaths among 1000 nonindigenous people/week) *(75)*. Although no information disaggregated by the town of belonging is available for Chile, municipalities with a higher percentage of Indigenous peoples present a higher rate of COVID-19 infection and mortality *(76)*. In Colombia, a study reported that, besides age, being Indigenous, male, and a beneficiary of a subsidized health insurance regime increased the risk of COVID-19 associated mortality *(77)*.

As most of the government mitigation measures did not consider local realities and the participation of Indigenous peoples was not considered, they had to launch their own prevention and care initiatives. Their culture, connection with their lands, and strong community allowed them to build their own COVID-19 responses. They restricted their movement in and out of their communities and engaged in social distancing, used their traditional medicine, strengthened their agricultural practices to guarantee livelihoods, and carried out solidarity actions to distribute food. In many cases, indigenous organizations developed their own monitoring systems. Likewise, they prepared and disseminated through various media information about the virus and forms of prevention and care, and prepared culturally adapted materials in Indigenous languages *(78)*.

COVID-19 effects on migrants

Migration in Latin America has undergone significant changes in the last two decades. Due to the massive migration of Venezuelan migrants and refugees in the last five years, intraregional migration is the most important form in South America, followed by migration from Caribbean countries and other continents such as Africa and Asia *(79)*.

During the first year of the pandemic (2020), lockdowns and mobility restrictions reduced migration unprecedently across the globe. However, regardless of the restrictions, migration flows increased throughout

2021 in the Americas due to the socioeconomic crisis caused by the COVID-19 pandemic, disasters, and political instability in migrants' countries of origin and residence.

Inhabitants of Cuba, the Dominican Republic, Haiti, and African and Asian countries already living in Latin America were forced to migrate north of the continent to secure their livelihoods due to the health, socioeconomic, and political impacts of the COVID-19 pandemic, including the rise of discrimination and xenophobia. Due to the lack of regular migration routes, these movements tended to occur in an irregular manner. In the period January–September 2021, the irregular transit of foreigners across the Darien and Colombia–Panama border increased by almost 10-fold compared to 2020 *(79)*. It is estimated that 91 305 people irregularly crossed the Darien area and approximately 62% were Haitian migrants.

The pandemic has exacerbated the preexisting vulnerabilities of migrant and refugee populations in the Region, given their high rates of informal jobs, overcrowded and precarious living conditions, and, in some cases, limited access to health services and social protection.

A report by the OECD concluded that COVID-19 cases are overrepresented among immigrants in most countries, with the risk estimated to be twice that of native-born residents *(78)*. A study conducted in Tijuana (Mexico) found that 53% of the migrants were seropositive for SARS-CoV-2 antibodies, which is more than double the national prevalence estimate (identified as 25%) *(80)*.

COVID-19 has particularly severely increased the vulnerability of the 5.6 million Venezuelan migrants. Their refugee status has been impaired, informal work conditions have become even more precarious, domestic violence has increased, and health protection has been reduced. In this scenario, the situation of women, and especially sex workers, carries a double burden associated with their gender *(81)*.

2.3. Socioeconomic impact of COVID-19

The socioeconomic impacts of COVID-19 have resulted in an increase in the number of people living in poverty and a worsening income distribution. Countries of the Americas have been severely affected by the COVID-19 pandemic in terms of health and from an economic perspective. They have become COVID-19 hotspots, a situation exacerbated by weak social protection and deepening inequalities *(82)*.

The impacts and implications of COVID-19 affect different populations differently, and disproportionately affect those groups which were already living in conditions of vulnerability. Certain population groups have been particularly disadvantaged, especially those that faced challenges in accessing essential health services and social protection even before COVID-19, among them women, girls, migrants, workers with precarious employment conditions and their families, people with disabilities, older people, and Indigenous and Afro-descendant populations *(83)*.

Social protection

Most LAC governments used social protection tools like cash and in-kind transfers, unemployment benefits, wages, and subsidies to curb contagion and to support targeting policy actions for the most vulnerable households, workers, and firms in 2020 in response to the pandemic, but there was a considerable decline in 2021.

The income-support systems in LAC countries were both fundamental and insufficient due to low coverage of contributory social protection. Most workers are engaged in the informal sector, and even those in the formal sector have limited access to income protection instruments such as unemployment insurance programs. Also, noncontributory cash transfer programs exhibit significant undercoverage of the poor and vulnerable population, and countries lack expansion strategies that allow coverage of transient poverty in the face of shocks *(84)*.

LAC countries implemented 199 income-support interventions. Forty-five interventions were built on existing programs, increasing the value of benefits (in 26 cases) or the number of beneficiaries (in 19 cases), while 154 interventions were implemented as entirely new programs *(85)*.

According to one study *(85)*, the number of beneficiaries that COVID-19 social protection interventions reached is equivalent to 37.7% of the LAC population, exceeding the world average of 17% *(86)*. The highest number of beneficiaries relative to the country's population was recorded in the Plurinational State of Bolivia (129%), Chile (77%), Panama (63%), Dominican Republic (58%), and Colombia (51%). Most interventions were short-lived, arguably due to government budget considerations, with benefits limited to a 3.6-month period, compared with 4 months worldwide.

Even though LAC countries faced challenges in supporting all the needs of the population during the pandemic, the emergency cash transfers paid by governments specifically to respond to the drop in income caused by the COVID-19 pandemic were very important in preventing a further increase in inequality. On average for these countries, the Gini coefficient would have risen by 4% between 2019 and 2020 without the emergency transfers, whereas with the transfers it increased by just 1% (Annex Table 7).

Economic

In the first months of the pandemic in 2020, the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) documented a significant decline in the demand for tourism services aligned with the reduction in international tourist arrivals. This sector is one of the main contributors to exports, the economy,

Annex Table 7. Latin America (7 countries): inequality indices with and without emergency cash transfers, 2019 and 2020[a]

	GINI COEFFICIENT		
COUNTRIES	**2019**	**2020 WITH TRANSFERS**	**2020 WITHOUT TRANSFERS**
Bolivia (Plurinational State of)	0.430	0.449	0.457
Chile[b]	0.454	0.475	0.488
Costa Rica	0.495	0.490	0.514
Paraguay	0.473	0.452	0.458
Ecuador	0.456	0.466	0.475
Peru	0.429	0.464	0.477
Dominican Republic	0.432	0.405	0.427
Simple average	0.453	0.457	0.471
Variation 2019–2020 (%)		1	4

[a] Countries in which the surveys included specific questions to identify income received through emergency transfers. Brazil is not included in the analysis as its 2020 survey does not allow emergency transfers to be identified accurately.

[b] The figures shown for 2019 correspond to 2017.

Source: Economic Commission for Latin America and the Caribbean, on the basis of Household Survey Data Bank (BADEHOG), in Economic Commission for Latin America and the Caribbean (ECLAC), Social Panorama of Latin America and the Caribbean, 2022 (LC/PUB.2022/15-P). Santiago: ECLAC; 2022. Available from: https://repositorio.cepal.org/bitstream/handle/11362/48519/1/S2200946_en.pdf

and employment in the Caribbean, but also in many cities and local communities in Latin America. The tourism economy accounted for 35% of employment in the Caribbean and 10% in Latin America *(87)*.

The International Monetary Fund reported a 7.0% economic contraction for LAC in 2020. Caribbean nations that depend on tourism had deep economic recessions, several with estimated economic declines of over 13%. In 2021, the region's economies began modest recoveries; however, many countries are still struggling with protracted recoveries as they rely on global investment, trade, and tourism.

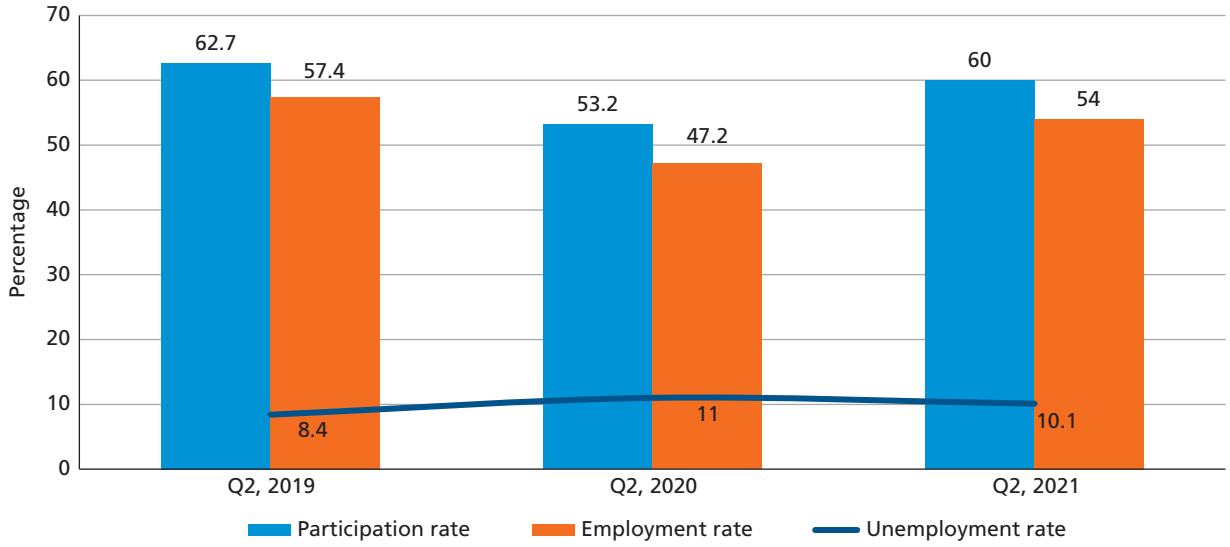
According to estimates by the International Monetary Fund, GDP growth was expected to slow in LAC regions to 2.4% in 2022. This slowdown is inevitable as economies return to their pre-pandemic GDP levels. This slowdown also takes place in a context of significant asymmetries between high-income, and low- and middle-income countries regarding their capacity to implement fiscal, social, monetary, and health and vaccination policies for a sustainable recovery from the crisis unleashed by the COVID-19 pandemic *(88)*.

The region has three major challenges in the recovery of the economy: ensuring the sustainability of public finances; increasing potential growth; and doing so in a manner that promotes social cohesion and addresses social inequities. However, addressing these will take time, as these challenges already existed before the pandemic.

Labor market

The decrease in economic activity, as well as lockdowns and containment measures during the pandemic, have had a particularly pronounced effect on the lower income strata. LAC was among the most affected regions. In 2020, the COVID-19 pandemic caused an unprecedented labor market crisis, which took the form of sharp falls in employment and labor force participation, resulting in historic rises in unemployment. ECLAC

Annex Figure 9. Latin America and the Caribbean (14 countries): main labor market indicators



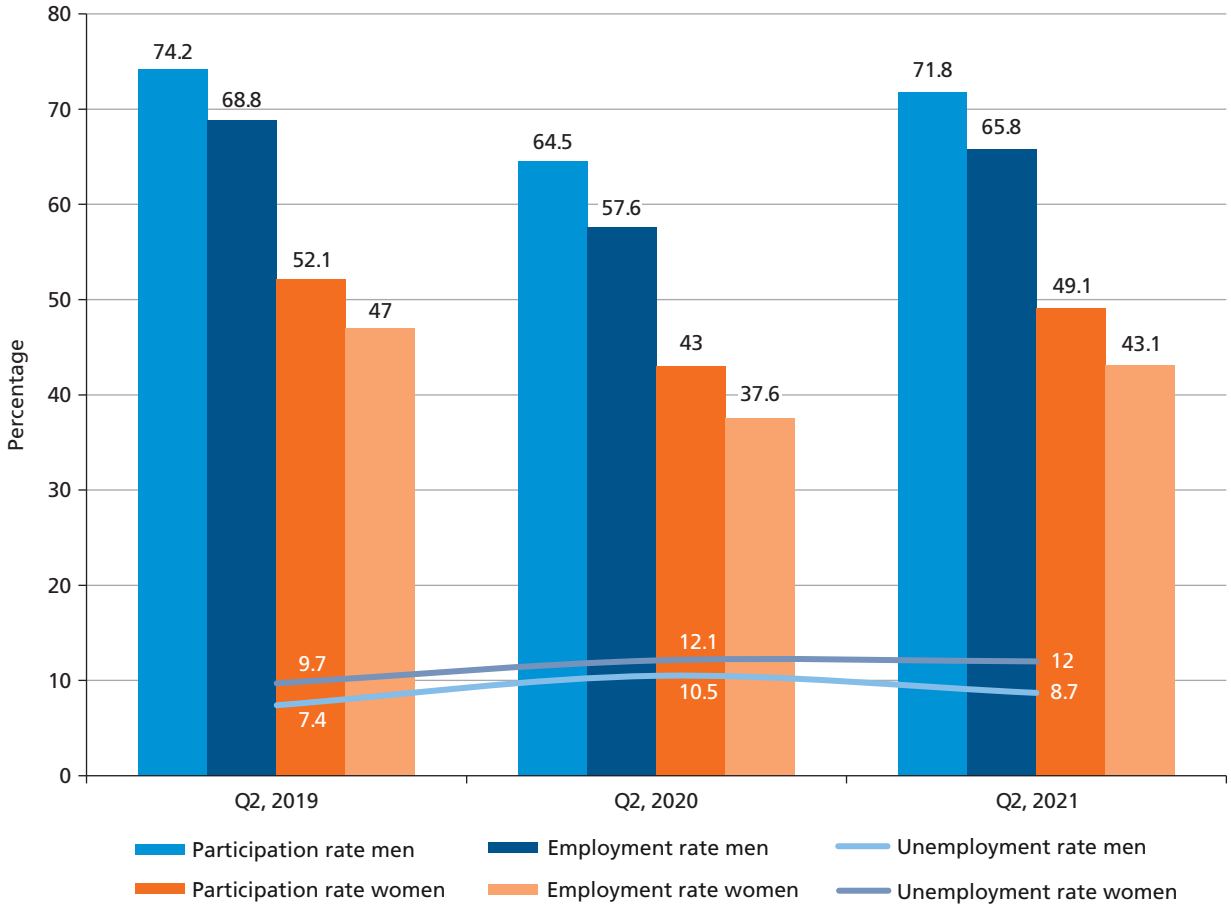
Notes: The countries are: Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Jamaica, Mexico, Nicaragua, Paraguay, Peru, and Uruguay.

Source: Economic Commission for Latin America and the Caribbean (ECLAC) and International Labour Organization (ILO), on the basis of official information from the countries.

estimated unemployment rates of 12% for women and 8.7% for men in 2021, compared to figures of 12.1% and 10.5% respectively, recorded in 2020 (Annex Figure 9 and Annex Figure 10) *(89)*.

In 2020, the second quarter of the year saw a massive outflow of people from the labor market and an unprecedented fall in employment, but from the third quarter onward, as vaccination proceeded in the region and mobility restrictions were lifted, there was a gradual return to the labor market and a slower recovery in employment. The first half of 2021 saw a positive change in regional output, reflecting both a low base of comparison because of the fall in 2020 and the positive effects of stronger global growth, resulting in higher external demand and commodity prices *(89)*. Nevertheless, the positive increase in the labor market was not enough to restore 2019 levels of output and employment *(89)* (Annex Figure 10).

Annex Figure 10. Latin America and the Caribbean (14 countries): main employment indicators, by sex, second quarters of 2019, 2020, and 2021



Notes: Simple average of Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Jamaica, Mexico, Nicaragua, Paraguay, Peru, and Uruguay.

Source: Economic Commission for Latin America and the Caribbean (ECLAC) and International Labour Organization (ILO) (2021), on the basis of official information from the countries.

The International Labour Organization (ILO) estimates that an equivalent of over 30 million jobs were lost in 2020, owing to unemployment, outflows from the labor force, and cuts to working hours *(89)*. The pandemic affected women, young people, and workers in the informal sector and low-income strata to a greater extent *(89)*.

It is important to highlight the rapid take-up of telework in the Region, which in some countries was a determining factor in enabling production and work activities to continue. Progress with vaccination campaigns – albeit uneven – and the gradual easing of lockdowns have enabled a slow recovery in key labor indicators. However, they have not yet returned to precrisis levels, particularly in formal employment.

Poverty

Poverty and extreme poverty in Latin America reached levels in 2020 that had not been seen in the last 12 and 20 years, respectively. The indices of inequality in the region worsened due to the COVID-19 pandemic, despite the emergency social protection measures those countries adopted to halt this phenomenon.

According to ECLAC, in 2020, 33.0% of the population of Latin America was living in poverty and 13.1% in conditions of extreme poverty; while in 2021, it was 32.1% and 13.8%, respectively (Annex Figure 11), reflecting the continuation of the social crisis *(90)*. This means that approximately 201 million to 204 million people did not have sufficient income to meet their basic needs and that from 81 million to 86 million lacked the means even to buy a basic food basket.

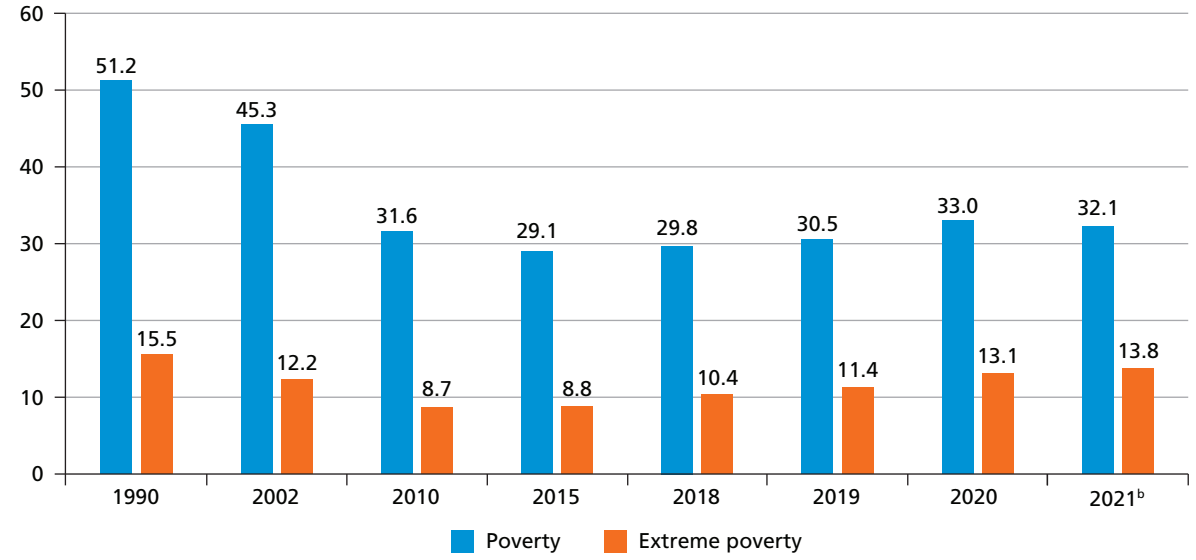
The incidence of poverty is heterogeneous not only among the countries of the region but also among the population groups living within them. Women, children, adolescents, and Indigenous and Afro-descendant people were more affected by income poverty.

According to the household surveys used to monitor living conditions in the countries of the region, women aged between 25 and 59 years have higher poverty rates than men in the same age range in all of the region's countries. Poverty rates for people under 15 years of age are between 1.3 and 1.8 times higher than those of the next age group (15–39 years). The largest gaps are found in countries with low poverty rates, such as Brazil, Chile, the Dominican Republic, and Uruguay. In countries with higher poverty rates, the gap between age groups tends to be narrower. Indigenous peoples are more likely to be poor than are the rest of the population. In six of the seven countries for which information on ethnic or racial status is available, Indigenous peoples have significantly higher poverty rates than the nonindigenous and non-Afro-descendant populations, and Afro-descendant populations also have higher poverty rates than the nonindigenous and non-Afro-descendant populations, although the gaps tend to be somewhat smaller than with the Indigenous group *(90)*.

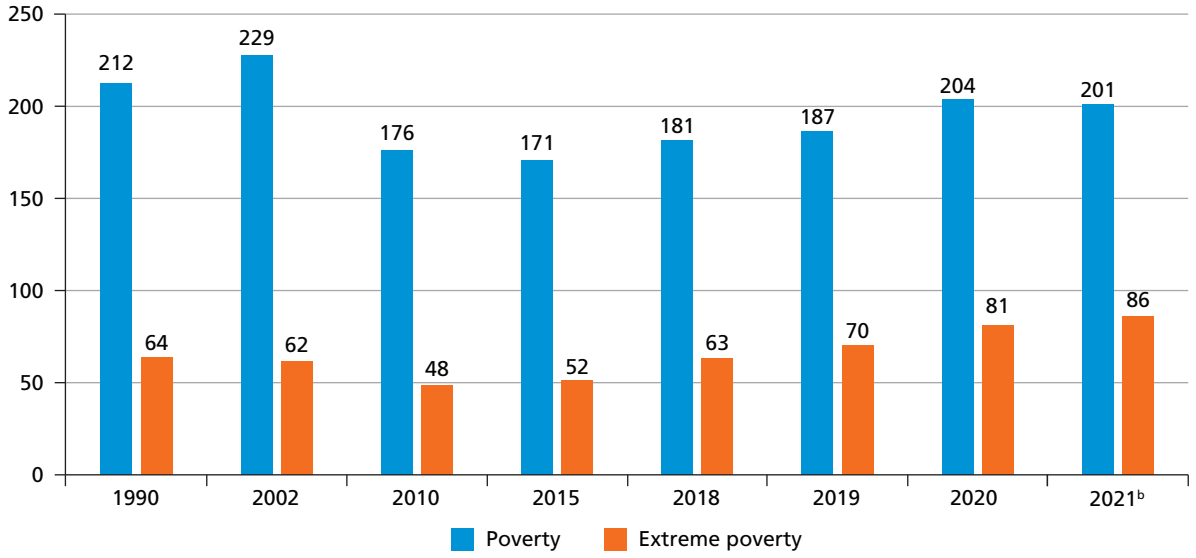
Additionally, hunger in LAC is at its highest point since 2000, after a 30% increase in the number of people suffering from hunger between 2019 and 2020. In just one year, and in the context of the COVID-19 pandemic, the number of people living with hunger increased by 13.8 million, reaching a total of 59.7 million people according to the Regional Overview of Food Security and Nutrition 2021 (Annex Table 8) *(91)*.

Annex Figure 11. Latin America (18 countries): poverty and extreme poverty rates and people living in poverty and extreme poverty, 1990–2021

A. Percentage of poverty and extreme poverty, 1990–2021[b]



B. Millions of people living in poverty and extreme poverty, 1990–2021[b]



Notes: a) Weighted average of: Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela (Bolivarian Republic of). b) The figures shown for 2021 are projections.

Source: Economic Commission for Latin America and the Caribbean. Social panorama of Latin America 2021. Santiago: ECLAC; 2022 [cited 9 May 2023]. Available from: https://oig.cepal.org/sites/default/files/social_panorama_latam_2021.pdf.

Annex Table 8. Prevalence of food insecurity (percentage)

REGION	MODERATE			SEVERE			MODERATE OR SEVERE		
	2014	2019	2020	2014	2019	2020	2014	2019	2020
World	14.3	16.5	18.5	8.3	10.1	11.9	22.6	26.6	30.4
Latin America and the Caribbean	17.2	21.8	26.7	7.7	10.1	14.2	24.9	31.9	40.9
Caribbean	–	–	32.1	–	–	39.2	–	–	71.3
Mesoamerica	23.7	20.9	26.3	6.5	7.3	11.2	30.2	28.2	37.5
South America	13.3	21.5	26.3	5.4	8.6	12.9	18.7	30.1	39.2

Source: Food and Agriculture Organization of the United Nations. Latin America and the Caribbean: Regional overview of food security and nutrition 2021: Statistics and trends. Rome: FAO; 2021 [cited 28 May 2022]; Available from: https://doi.org/10.4060/cb7497en.

2.4. PAHO'S Response to COVID-19 (object of the evaluation)

PAHO serves as the Regional Office for the Americas for the World Health Organization (WHO) and the specialized health agency of the Inter-American System. It is comprised of its Member States and the Secretariat – Pan American Sanitary Bureau (PASB or the Bureau). The Bureau is committed to providing technical support and leadership to the PAHO Member States as they pursue their goal of Health for All. The PASB includes the Washington, D.C. headquarters, 27 country offices (with 35 Member States), three subregional offices, and three specialized centers in the Region.

On 30 January 2020, WHO declared the COVID-19 outbreak as a PHEIC, and by 12 March 2020 had identified it as a pandemic. By mid-January 2020, PAHO had already activated an organization-wide response to provide technical cooperation to all its Member States and help address the impact of the pandemic. This included improvement of surveillance, testing, and laboratory capacity; infection prevention control; strengthening healthcare services; clinical management; and risk communication, in alignment with the WHO COVID-19 Strategic Preparedness and Response Plan *(92)*. On 5 March 2020, PAHO launched its COVID-19 Response Strategy and Donor Appeal to support COVID-19 preparedness and response efforts in the Americas *(93)*. PAHO's Regional COVID-19 Response Strategy (2021) built on the knowledge acquired during the first stage of the pandemic and incorporated lessons learned from the previous year *(94)*. PAHO adjusted its response strategy according to the behavior of the pandemic in the Region, in line with WHO global guidelines, as reflected in the five Strategic Preparedness and Response Plans (SPRPs) developed between 2020 and 2022. Adjustments to the SPRP were more frequent during the first year of the pandemic, due to the lack of knowledge of the virus, the scarcity of available scientific information, and the uneven impact among countries in the Region. In 2021, the response plan was adjusted to concentrate efforts on mass vaccination against COVID-19. In 2022, the SPRP was updated to direct country efforts toward ending the pandemic in the Region, envisaging different scenarios.

These regional response plans defined an overall goal ("Support Member States in the Americas in preparing for and responding to COVID-19 outbreaks") and two specific objectives ("1 Save lives and protect those individuals and populations facing the severest vulnerabilities, including healthcare workers"; "2. Limit human-to-human transmission, including reducing secondary infections among close contacts, to slow down the spread of the disease"). While the overall goal was directly related to PAHO's mandate and role, the specific objectives fell mainly under the countries' scope of action, even though national responses

were supported by PAHO. The Evaluation of the Pan American Health Organization Response to COVID-19 (EPRC) was able to document and assess PAHO's actions in achieving the overall goal but, in contrast, it was not part of the scope of the evaluation to assess country-level responses. Under this perspective of analysis ("contribution"), PAHO was able to provide considerable institutional, technical, and logistical support to Member States and other regional organizations throughout the different phases of the pandemic. PAHO's response adopted several cooperation modalities and was organized around the 10 pillars of the SPRP. These strategies and response planning documents constitute the main corpus around which the evaluation has been structured. The strategy and response plan documents were intended to guide and support the response of Member States, so the focus of the analysis was on PAHO's organizational performance and its contribution to the response.

Since its establishment, PAHO's mandate has never been confronted with a public health emergency of such magnitude. Previous pandemics, like influenza (and influenza H1N1), cholera, HIV/AIDS, or recent PHEICs such as Zika and chikungunya, have not been as overwhelming as SARS-CoV-2 in terms of populations at risk, transmission dynamics, diagnostic resource availability, reorganization of health services, and complex clinical management of cases. Moreover, no other epidemic has required an integrated acute and long-term response based on improved surveillance, diagnostic capabilities, and reorganization of medical resources and treatment facilities, along with social and economic policies to support large groups of susceptible and vulnerable populations. At the onset of the COVID-19 pandemic, PAHO was also in a financial crisis.

Since the onset of the pandemic, PAHO has developed, published, and disseminated evidence-based technical documents to guide country-level strategies and policies to manage COVID-19. It has collaborated with its partners in the Region and provided technical cooperation, evidence-based guidance, and recommendations. Member States have implemented public health measures, according to their capacity and the epidemiological situation, with varying results.

Partnerships were important to achieve PAHO's strategic goals. PAHO established new partnerships with a larger variety of organizations to mobilize resources to increase the reach and coverage of its programs, foster cooperation, and find new ways of advancing health. These partnerships function at the regional, subregional, national, and subnational levels, involving organizations and institutions from both Member and non-Member States.

There were global efforts to design, produce, and distribute several potentially safe and effective vaccines. PAHO shifted its focus to developing national deployment plans for the arrival and distribution of vaccines through the COVAX Facility. This was launched in June 2020, and co-led by Gavi, CEPI, UNICEF, and WHO. The goal was to accelerate the development and production of COVID-19 vaccines and to guarantee fair and equitable access for every country in the world, regardless of their income level. PAHO participated actively within the Gavi/COVAX Facility by managing the international logistics of vaccine deliveries, providing guidance in terms of options and requirements, and ensuring the quality of the distributed vaccines, which are quality-assured either by WHO or through the prequalification process. By 15 February 2022, in association with COVAX, PAHO had supported the delivery of 100 million COVID-19 vaccine doses in the Region using PAHO's Regional Revolving Funds, which is the designated procurement agency for COVAX in the Americas *(95)*.

PAHO supported countries to put in place systems to maintain and strengthen national immunization programs. It provided guidance on policy and implementation recommendations for COVID-19 vaccination. In July 2020, PAHO developed and disseminated guidelines for planning the introduction of COVID-19 vaccines,

and by September 2020 had established a Task Force for COVID-19 Vaccination in the Americas to provide strategic, technical, and operational guidance for the successful planning and rollout of vaccines.

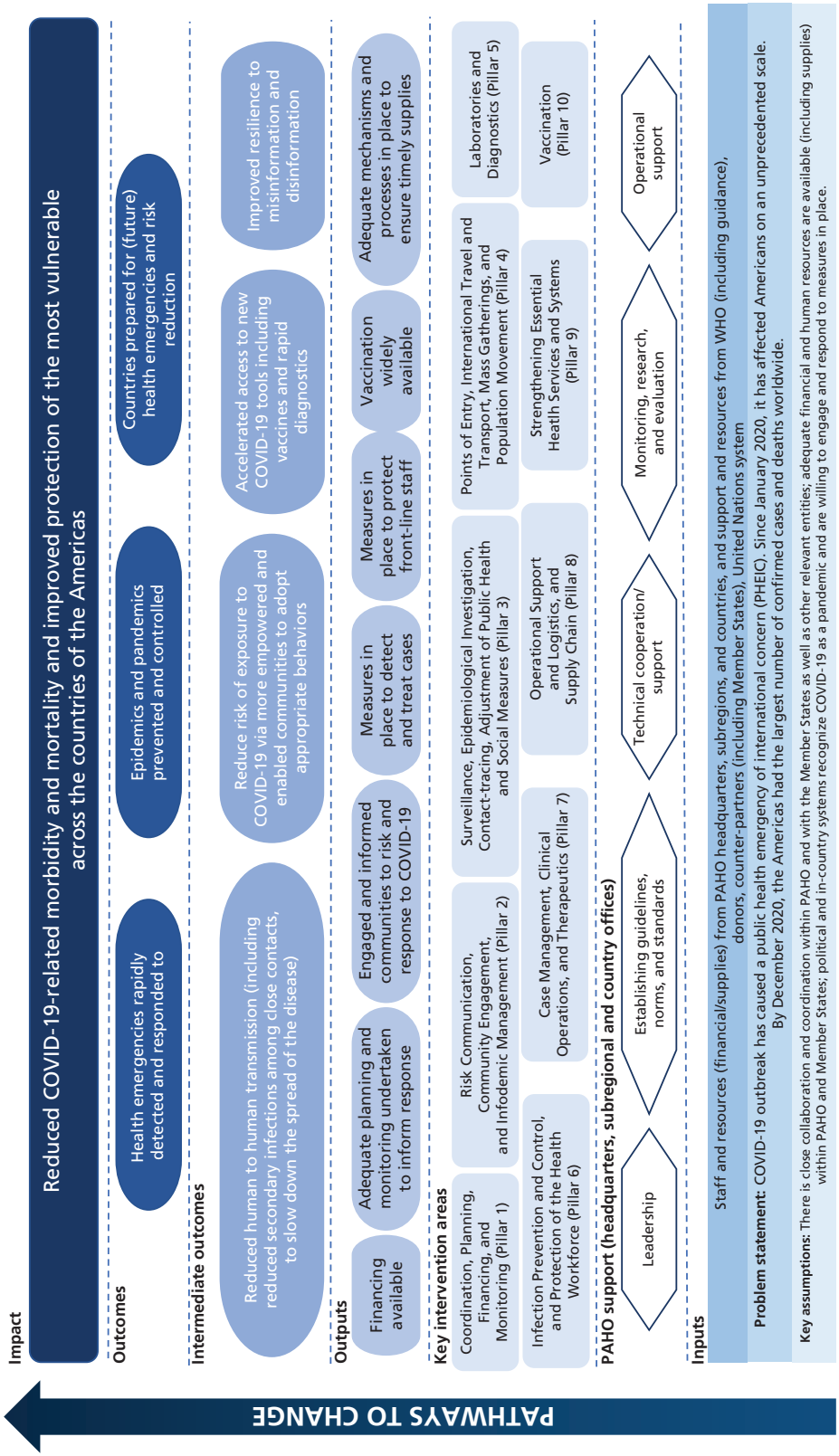
PAHO's emergency reserve and logistics mechanisms, which include the Panama warehouse, played a role in receiving and shipping out personal protective equipment (PPE) and other life-saving supplies. Its procurement team is also coordinating with WHO and United Nations agencies "to find solutions to current critical procurement challenges." The Panama logistics hub has supported the delivery of 747 tonnes of medical supplies to 36 affected countries and territories via 348 international shipments. A humanitarian dispatch has occurred on average every 48 hours. These were enhanced during the COVID-19 pandemic and utilized for other concurrent emergencies, such as the volcanic eruption in Saint Vincent and the Grenadines and the earthquake in Haiti. PAHO's strategic stock is maintained by the PASB with support from voluntary contributions and partner donations. PAHO strengthened its technical cooperation, and its partnership with Direct Relief, mobilizing 38 shipments of medicines and medical supplies to countries in need.

Canada and the United States have played an instrumental role in supporting PAHO by providing funding, supplies, and equipment. In 2022, USD 75 million was allocated to PAHO for crosscutting issues such as attention to migrants and humanitarian assistance in emergencies. Funding from donors, including the United States Agency for International Development (USAID), fills an important resource gap that has enabled PAHO to provide ongoing technical cooperation and information exchange to its priority Member States. This support continued and evolved during the pandemic. Both countries also received support from PAHO during the pandemic including advice on internal measures for responding to COVID-19. PAHO also facilitated bilateral and multilateral cooperation on COVID-19 *(96)*.

Since September 2020, PAHO has emphasized five strategic lines of action, which include strengthening (1) leadership, stewardship, and governance; (2) epidemic intelligence; (3) health systems and service delivery networks; (4) emergency operations response and supply chains; and (5) supporting the introduction and access to COVID-19 vaccines *(96)*.

The expected results of PAHO's COVID-19 response, including the 10 pillars of PAHO's COVID-19 response strategy and activities, are detailed in PAHO's 2020 report *Response to the COVID-19 Pandemic in the Americas.* The WHO's 2021 publication *COVID-19 Strategic Preparedness and Response Plan: Monitoring and Evaluation Framework* provides indicators and results that PAHO is expected to report against. The Evaluation Team has used these documents to reconstruct the theory of change to demonstrate the pathways to change (Annex Figure 12).

Annex Figure 12. Theory of change of PAHO COVID-19 response



Annex 3.
Extended methodology and ethical considerations

3.1. Purpose and objectives of the evaluation

This evaluation sought to evaluate the response of the Pan American Health Organization (PAHO or the Organization) to the ongoing COVID-19 pandemic. It is part of PAHO's Corporate Evaluation Workplan (2022) and considers the need for PAHO to continuously adapt its response to changing needs and an evolving operating environment. It is therefore timely and useful, as the evidence generated will inform policymaking and decisionmaking during both ongoing and future public health crises. The evaluation has provided an objective and independent assessment of the Pan American Sanitary Bureau (PASB or the Bureau) in terms of its performance, preparedness for and response to the COVID-19 pandemic, and the contribution of operations to results, as well as learnings from what has and has not worked. It has therefore served both an accountability and an organizational learning function.

Accountability: The purpose of the Evaluation of the Pan American Health Organization Response to COVID-19 (EPRC) was to independently evaluate PAHO's overall response to the COVID-19 pandemic at various levels: identifying trends, generating institutional and cross-country learning, and informing timely actions to strengthen the ongoing response to the pandemic and preparedness for future health emergencies. It also provided an understanding of how well PAHO performed as measured by results achieved against planned targets and established benchmarks for the COVID-19 response, and the activities measured against the 10 pillars of the PAHO COVID-19 response strategy. It assessed PAHO's contribution, through its intervention strategies (such as technical cooperation), toward the planned results.

Learning: Serving a formative purpose, the EPRC went beyond current reporting efforts and sought to inform leadership and decisionmakers about the challenges, areas for improvement, lessons learned, and good practices in PAHO's response to the COVID-19 pandemic. It also sought to increase PAHO's knowledge on the effectiveness of the ongoing response so far, and its institutional capacity for emergency response. The evaluation looked at PAHO's efforts in working with countries and partners to attenuate the pandemic's effect on public health, essential health services, and inequity gaps. The evaluation provided findings and actionable recommendations to inform current and future public health crises, and to improve PAHO's work at the regional, subregional, and country levels.

The specific objectives of the evaluation were:

- Assess PAHO's preparation, internal organization, and implementation of the COVID-19 pandemic response strategy, and document key achievements as well as challenges, gaps, and areas for improvement.
- Examine key enabling and limiting factors that have been responsible for achievements and gaps, including the implications for how PAHO delivers its regular programs outside of the emergency context of the COVID-19 response.

- Provide evidence-based recommendations for corrective actions to strengthen the pandemic response while building a resilient recovery.

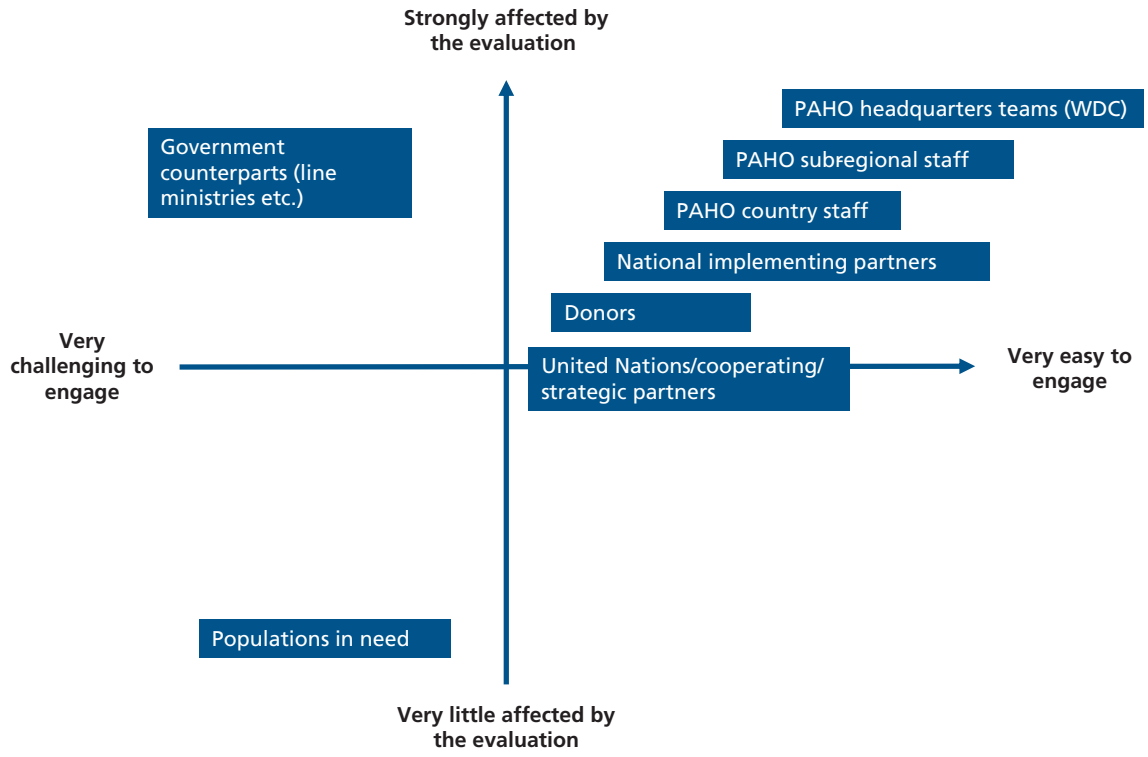
3.2. Stakeholder analysis (evaluation use and audiences)

Stakeholders and users of this evaluation are defined as those actors that may influence the evaluation and those that may be influenced by it. There are multiple users of this evaluation. They include internal users, external users, and national actors and beneficiaries. Primary users will be the PAHO Executive Management (EXM); the PAHO Department of Health Emergencies (PHE); the Department of Planning, Budget, and Evaluation (PBE); and other technical and enabling departments at headquarters, subregional, and country offices. Secondary users will include counterparts/implementing partners at the regional, subregional, and national levels (governments, United Nations agencies, civil society organizations [CSOs], private sector, media, academic and research institutions, philanthropic foundations, and financial institutions). The World Health Organization (WHO) is also likely to benefit from the evaluation considering that PAHO is its regional body for the Region of the Americas.

Based on 15 inception-phase interviews with PAHO personnel, there appears to be strong interest in the evaluation and intent to use the evaluation findings both for learning and accountability purposes. There is also an intent to use the findings and recommendations as a form of stakeholder engagement with Member States, donors, United Nations agencies, and cooperating and implementing partners.

Stakeholder analysis has been conducted to demonstrate the level of stakeholder engagement in the evaluation, as well as the extent to which they may be affected by its findings (Annex Figure 13). Stakeholders are positioned on the figure according to the extent to which the evaluation might affect them (vertical axis) and how challenging it was to engage them (horizontal axis).

Annex Figure 13. Stakeholder analysis



The main users of the evaluation are likely to be PAHO management and personnel at all levels. Stakeholder engagement has taken place as follows:

- Reviewing and commenting on the evaluation deliverables (inception and evaluation reports as well as data collection instruments);
- Participation in key informant interviews (KIIs) and surveys;
- Participation in briefings and presentations, at key stages of the evaluation, as agreed with PAHO, to gather regular feedback, promote ownership of findings, and embed the learning approach.

More detailed information about evaluation users is provided in Annex Table 9. This table introduces all the categories of stakeholders, the degree to which they have expressed an interest in being included in the evaluation, how they engaged, and how they intend to use the evaluation results. This stakeholder matrix is based on information collected during the preliminary inception-phase interviews with PAHO personnel and the senior public health and evaluation advisors. The inception-phase interviews did not include representation from external stakeholders, and their interest in the evaluation is based on the Evaluation team's own judgment as well as inception-phase interviews. Everyone who was encountered in the inception phase expressed a desire to participate in the evaluation and access the findings.

Annex Table 9. Evaluation stakeholder matrix (evaluation users, their interest in, and use of this evaluation)

CATEGORY OF EVALUATION USERS	USERS	TYPE	INTEREST IN/ EXPECTATIONS FROM THE EVALUATION	SUPPORT TO/ ENGAGEMENT IN THE EVALUATION	USE OF EVALUATION
Core stakeholder	PAHO Executive Management team, PHE, PBE, and other technical and enabling departments (related to COVID-19 response)	Primary	The EPRC to provide a credible evidence base and reflections on PAHO's strategic relevance and performance, to support strategic and operational management decisions, in particular for the continuation of support and preparation for future public health emergencies. To obtain institutional and cross-country learning.	Reviewed and commented on the draft evaluation deliverables (inception and evaluation reports) and provided strategic insights and reflections on the regional context and PAHO response strategies in the Americas. Engaged relevant subregional and country teams to support the evaluation and provide access to relevant information.	Use evaluation findings and recommendations from the EPRC to support PAHO strategic and operational management decisions, in particular for the continuation of support and preparation for future public health emergencies at the subregional and country level. Use lessons learned identified by the EPRC on strengthening guidance on strategic planning and technical intervention areas.

(Continued)

CATEGORY OF EVALUATION USERS	USERS	TYPE	INTEREST IN/ EXPECTATIONS FROM THE EVALUATION	SUPPORT TO/ ENGAGEMENT IN THE EVALUATION	USE OF EVALUATION
Internal stakeholders	PAHO subregional and country offices/staff/ management Contingent workers (not PAHO staff/general services staff/ front-line workers)	Primary	To provide a credible evidence base to support operational management decisions, in particular for program design and implementation processes. May potentially be strongly affected by interventions and targeting strategies and the efficiency and effectiveness of the response.	Systematic engagement, in particular through interviews and debriefings. Providing the majority of the required information, or facilitating access to it, enabling access to and contact with relevant stakeholders. Possible participation in survey/interviews. Potential audience for dissemination of findings.	Use evidence and recommendations to support operational management decisions, in particular in relation to program design and implementation processes. Respondents and recipients of the information generated by the evaluation may be interested in how the program has affected them. The findings and lessons learned could, therefore, potentially be shared where possible.
Internal stakeholders	PAHO Governing Bodies	Secondary	The EPRC to provide an independent performance assessment of PAHO's response as a basis for accountability to donors and Member States.	Reviewed and commented on the evaluation report and provided strategic insights and reflections on the regional context and PAHO response strategies in the Americas.	Help ensure that adjustments, good practices, and general reporting are captured and accessed by donors and Member States.

(Continued)

CATEGORY OF EVALUATION USERS	USERS	TYPE	INTEREST IN/ EXPECTATIONS FROM THE EVALUATION	SUPPORT TO/ ENGAGEMENT IN THE EVALUATION	USE OF EVALUATION
External stakeholders	United Nations agencies/ strategic partners (at headquarters/ subregions)	Secondary	To identify gaps/ good practices and synergies within the United Nations system, and other international organizations, as well as duplications, and provide recommendations. Provide greater clarity on PAHO's role and positioning in the wider COVID-19 public health emergency preparedness and response.	Participated in interviews and facilitated access to relevant information.	The evaluation findings are intended to clarify PAHO's achievements and may help to position its role in the wider public health emergency preparedness and response, including as a tool for obtaining donor investment. It can also be used as input to improve collaboration and avoid duplications in the services delivered by other actors to ensure improved coherence.
External stakeholders	Donors/ private sector/ financial institutes/ foundations	Secondary	To inform on results achieved and efficient use of funds. The findings of the evaluation can contribute to donor/private sector strategies and involvement in future financial support for PAHO.	Participated in interviews.	Use of evaluation evidence and recommendations to inform future funding and strategic decisions.

(Continued)

CATEGORY OF EVALUATION USERS	USERS	TYPE	INTEREST IN/ EXPECTATIONS FROM THE EVALUATION	SUPPORT TO/ ENGAGEMENT IN THE EVALUATION	USE OF EVALUATION
National counterparts	Member States (government officials including ministry of health)	Secondary	To provide insights on PAHO coordination with the government, how it targets its interventions, and lessons learned from its interventions.	Participated in interviews.	Evaluation is expected to enhance coordination and increase coherence, helping to achieve greater implementation, uptake, scale-up, and sustainability of PAHO-supported activities. Findings can also inform advocacy and enhance ownership by the government. Show Member States the added value of PAHO to encourage engagement and demonstrate that PAHO is a learning organization.
National counterparts	Cooperating/ implementing partners at the country level (INGOs/ NGOs/CSOs)	Secondary	The evaluation is expected to enhance collaboration and synergies, helping to achieve greater coordination, integration, uptake, scale-up, and sustainability of PAHO-supported activities	Participated in interviews. Representatives will participate in debriefings and be invited to join the dissemination workshops.	Greater awareness of PAHO's mandate, strategies, objectives, strengths, and challenges may lead to increased coordination and stronger partnerships. Information may help to refine their approaches, identify gaps, and showcase achievements and good practices.

(Continued)

CATEGORY OF EVALUATION USERS	USERS	TYPE	INTEREST IN/ EXPECTATIONS FROM THE EVALUATION	SUPPORT TO/ ENGAGEMENT IN THE EVALUATION	USE OF EVALUATION
Others	Private sector, media, academic/ research institutes	Secondary	EPRC findings to contribute to a wider body of knowledge on public health emergencies (preparedness and response) under extremely challenging conditions and across diverse contexts.	Will have access to the summary evaluation report.	The evaluation is expected to provide knowledge (insights, lessons learned) of what works, how, and for whom, so that these can provide the basis for future programming, evaluations, research, advocacy, and discussions on how to enhance future preparedness and response to public health emergencies.

3.3. Evaluation scope and approach

Evaluation scope[6]

Evaluation object: The evaluation examined PAHO's ongoing response to the COVID-19 pandemic. The EPRC documented the (1) role, (2) responsibilities, and (3) actions of regional, subregional, and country offices during the implementation and delivery of the response operations.

PAHO's response is taken to mean all response activities by the PASB, under the framework of PAHO Response to the COVID-19 Pandemic in the Americas: Response Strategy and Donor Appeal, including the Washington, D.C., headquarters *(27, 97)*, country offices (that serve 35 Member States), and three specialized centers in the Region.

Geographical scope: This encompasses the entire region of the Americas where PAHO operates and is engaged in the ongoing response to COVID-19. This means examining the response operations undertaken by the entire organization at all geographical levels where it operates. The EPRC included within its scope all four subregions – Caribbean, Central America, South America, North America – and all 35 Member States. Countries and territories included in each subregion are:

- **Caribbean (which includes Barbados and the Eastern Caribbean countries):** Anguilla, Antigua and Barbuda, Bahamas, Barbados, Bermuda, Cayman Islands, Curaçao, Dominica, French Guiana, Grenada, Guadeloupe, Guyana, Haiti, Jamaica, Martinique, Montserrat, Netherlands Antilles, Saint Kitts and Nevis,

6 It is important to clarify that this evaluation serves a different purpose to the audits and other internal surveys that PAHO commissions, with a focus on learning as well as accountability.

Saint Lucia, Saint Vincent and the Grenadines, Sint Maarten, Suriname, Trinidad and Tobago, Turks and Caicos Islands, Virgin Islands (UK), Virgin Islands (US);

- **Central America:** Belize, Costa Rica, Cuba, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and Panama;
- **South America:** Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, and Venezuela (Bolivarian Republic of);
- **North America:** Canada, Mexico, Puerto Rico, and the United States of America.

The North America region, and in particular Canada and the United States, was included within the scope by considering their roles in providing technical cooperation and support to PAHO for responding to COVID-19 in the Region, as well as the support provided to them by PAHO. The PAHO/WHO Geneva relationship during the various phases of the pandemic was limitedly assessed.

Time scope: The time frame covered was from January 2020 to August 2022.

Out of scope: The evaluation did not assess how well Member States responded to the pandemic, but rather how PAHO collaborated with them and contributed to outcomes, and the uptake of PAHO's guidance, technical products, and services. This is a strategic rather than a technical evaluation and therefore did not evaluate specific departments, units, or individual programs.

Evaluation approach

The proposed evaluation approach was utility-driven, participatory, collaborative, and flexible. This ensured that the evaluation met PAHO's learning, and accountability needs, serving both summative and formative purposes. These are explained below.

Utilization-focused evaluation: This evaluation was undertaken for and with specific primary and secondary users and considering their intended uses. It assumes that the stakeholders had a high level of involvement during the evaluation. The primary purpose is to assess performance, identify lessons learned, and draw conclusions and recommendations for the ongoing COVID-19 response efforts, as well as to inform preparation for future health emergencies.

Participatory and collaborative: This approach emphasized participation and collaboration by engaging specific stakeholders at key stages during the evaluation and providing opportunities for feedback. This allowed stakeholders to gain a better understanding of the program and its evaluation, thereby increasing ownership and the probability of these stakeholders using the evaluation findings and recommendations to inform their decisions.

Flexibility: The evaluation focused on a series of topics ("central topics") identified during the scoping phase. Given the current conditions (ongoing COVID-19 response) and the tight evaluation timeline, not all evaluation questions and central topics were addressed in the same depth. The Evaluation Team and PAHO consequently adopted a flexible approach to adjust the priorities and intensity of the analysis as required.

3.4. Evaluation criteria, questions, and framework

Evaluation criteria

The evaluation questions were structured according to evaluation criteria based on PAHO's 2021 Evaluation Policy, and in line with five of the six OECD Development Assistance Committee (DAC) evaluation criteria:

relevance, coherence, efficiency, effectiveness, coordination, and sustainability (including coordination but excluding impact). Below are the definitions of each criterion according to the DAC's revised guidance.

- **Relevance:** The extent to which the strategies and activities of the response are suited to the target group's needs (especially marginalized groups), country priorities, contexts, policies, and practices. It also includes assessing the extent to which the response and strategies have been adapted according to changing circumstances during implementation.
- **Coherence:** The compatibility of the COVID-19 response intervention with other similar interventions being undertaken by PAHO and other organizations (internal and external coherence). The evaluation also sought to assess the extent to which the response has addressed equity concerns, human rights, and gender equality.
- **Efficiency:** Measurement of outputs in relation to inputs, funds, expertise, time, etc., to identify the extent to which the least costly resources are used to achieve the desired results. This requires comparing alternative approaches for achieving the same outputs to see whether the most efficient process has been adopted. It also includes timelines of implementation and delays.
- **Effectiveness:** The extent to which planned activities/objectives are achieved and the outputs have led to planned outcomes, as well factors contributing to under/overachievement of results.
- **Coordination:** The extent to which there has been systematic use of policy and practice to deliver support in a cohesive and effective manner.
- **Sustainability:** The extent to which the benefits of the response continue or are likely to continue.

The analysis of PAHO's **added value** and **lessons learned** was also incorporated into the analytical framework to reinforce the strategic level of analysis and to identify areas where PAHO's technical support to Member States has made a difference.

Evaluation questions and framework

The evaluation questions and framework guided the approach to the evaluation, including data collection and analytical methods. The evaluation questions given in the terms of reference (ToR) were reformulated to reflect priority areas emerging from the inception phase and in response to PAHO's information needs. The evaluation framework is given in Annex Table 10. It shows the alignment between the criteria, evaluation questions, data collection methods, and the final evaluation criteria. It shows the alignment between the criteria, evaluation questions, data collection methods, and the final evaluation criteria, together with the changes agreed upon during inception.

Annex Table 11 shows the final evaluation framework. During the analysis and drafting process, the Evaluation Team slightly rephrased or merged some of the evaluation subquestions to avoid duplication and to improve the logical flow of the document.

Annex Table 10. Terms of reference (ToR) evaluation question and reformulated evaluation framework

TOR – EVALUATION QUESTIONS	EVALUATION QUESTIONS AND SUBQUESTIONS (REFORMULATED FROM THOSE GIVEN IN THE TOR)
Relevance (including coherence and coordination) 1. To what extent is PAHO's COVID-19 response addressing Member States' overall priorities? How have these needs been determined at the country, subregional, and regional levels? 2. To what extent did PAHO's COVID-19 response address the needs and priorities of the Region's population, particularly the most vulnerable? 3. Which strategic lines of action or activities do Member States and other local, country-based partners consider most relevant? a. How has PAHO engaged with partners, including other United Nations agencies, academia, NGOs, CSOs, and the private sector to ensure a focus on local needs? b. How could PAHO better engage with partners to ensure coordinated support toward addressing local priorities?	Relevance (including coherence) 1.1 How have the needs generated by the pandemic been determined at the country, subregional, and regional levels? 1.2 To what extent has PAHO's COVID-19 response addressed Member States' overall priorities and been aligned with national response plans? 1.3 To what extent has PAHO's response included measures to ensure equity in Member States' national responses? 1.4 Which PAHO strategic lines of action or cooperation modalities during the response to the pandemic do Member States and other local, country-based partners consider most relevant? 1.5 How has PAHO adapted its response during various phases of the pandemic?
	Coordination 2.1 How has PAHO engaged with partners, including other United Nations agencies, regional, subregional, and country-level institutions, academia, NGOs, CSOs, and the private sector to ensure a focus on national needs? 2.2. How well has PAHO coordinated its response with partners (the United Nations, donors, NGOs, CSOs) to ensure a timely and cost-effective response and avoided duplications?

(Continued)

TOR – EVALUATION QUESTIONS	EVALUATION QUESTIONS AND SUBQUESTIONS (REFORMULATED FROM THOSE GIVEN IN THE TOR)
Effectiveness 4. How effectively did PAHO implement the response to COVID-19 to achieve its intended outcomes? What have been the main factors (internal, external) affecting PAHO's response? 5. To what extent did PAHO's COVID-19 response benefit the population, particularly the most vulnerable? 6. What have been the most significant challenges to emerge in responding to COVID-19 across countries and subregions? a. What was the level of uptake by Member States of PAHO's Technical Cooperation in the pandemic response? b. What patterns and trends, and lessons learned have emerged from the experiences of Member States' response to pandemic crisis management? 7. What could strengthen PAHO's ongoing response and the quality of the related service delivery by the Organization?	Effectiveness 3.1 To what extent did PAHO's COVID-19 response achieve its intended outcomes as per the Strategic Plan (including demonstrated capabilities to adjust its objectives according to changes in circumstances, contexts, and assumptions)? 3.1.1. Which activities have been most effective / least effective? Why? 3.1.2. What have been the main factors (internal, external) that compromised PAHO's response? 3.2 What have been the most significant challenges to emerge in responding to COVID-19 across countries and subregions?
Efficiency 8. How efficiently did PAHO adapt by repurposing to respond to the COVID-19 emergency in terms of use of time, resources, and the timeliness of delivery of products and services? a. How did this affect PAHO's regular program delivery? b. What organizational arrangements and procedures were most efficient, and which ones might need to improve? c. What factors influenced PAHO's ability to rapidly mobilize support for the pandemic response? 9. What lessons and best practices have been emerging from PAHO's implementation of the COVID-19 response? a. How efficiently has PAHO coordinated its response with partners (the United Nations, donors, NGOs, CSOs) to ensure a timely and cost-effective response and avoid duplication? b. What have been the most efficient practices in implementing PAHO's response, and the most significant gaps?	Efficiency 4.1. How well did PAHO adapt by repurposing to respond to the COVID-19 emergency in terms of use of time, resources, and the timeliness of the delivery of products and services? 4.1.1 How did this affect PAHO's regular program delivery (including effects of the financial crisis and PAHO's ability to mobilize resources and cover some of the essential functions without the funding)? 4.1.2. What organizational arrangements and procedures worked well / less well to deliver on time and budget? 4.2. To what extent have PAHO duty-of-care measures contributed to protecting the health and well-being of PAHO staff and to ensuring the continuity of PAHO's support? 4.3 What factors influenced PAHO's ability to rapidly mobilize support for the pandemic response (facilitating and hindering factors)?

(Continued)

TOR – EVALUATION QUESTIONS	EVALUATION QUESTIONS AND SUBQUESTIONS (REFORMULATED FROM THOSE GIVEN IN THE TOR)
	Lessons learned and best practices 7.1. What patterns and trends have been observed in Member States' responses and what Member State successes in policies and practices constitute lessons to be learned? 7.2. What lessons and best practices (efficient practices and significant gaps) have been emerging from PAHO's implementation of the COVID-19 response? 7.3. What areas emerge, based on the Resilience Framework, that PAHO could take into consideration as it continues to build national capacities at the individual and organizational levels?
Sustainability 10. What should be done differently to enhance COVID-19 response programming while addressing longer-term health needs or future emergencies? a. To what extent is PAHO's response contributing to equitable, resilient, and sustainable health systems? b. What, if any, changes could improve PAHO's response while addressing longer-term needs? 11. What pandemic preparedness actions and response measures were shown to be effective prior to and during the pandemic and will strengthen health systems over time?	Sustainability 5.1. What pandemic preparedness actions and response measures supported by PAHO were shown to be effective in previous outbreaks in the Region and during the pandemic, and have the potential to strengthen health systems over time? 5.2. What was the level of uptake by Member States of PAHO's technical cooperation in the pandemic response? 5.3. To what extent is PAHO's response contributing to equitable, resilient, and sustainable health systems? 5.4. To what extent can some of PAHO's interventions implemented during the emergency be applied to nonemergency periods and programs?
	Added value 6.1. What have been PAHO's unique contributions during the response to the COVID-19 pandemic (specifically in relation to the effects of its technical support to Member States)? 6.2. In which areas has PAHO's technical support to Member States excelled or made a difference?
	Conclusions Strategic level Operational level Organizational level
	Recommendations Strategic level Operational level Organizational level

Annex Table 11. Evaluation framework and indicators, sources of information, and data collection methods

OECD-DAC CRITERIA	EVALUATION QUESTIONS AND SUBQUESTIONS	INDICATORS	SOURCES OF INFORMATION	DATA COLLECTION METHODS
1. Relevance (including coherence)	1.1 How have the needs generated by the pandemic been determined at the country, subregional, and regional levels?	Several needs analyses/ assessments conducted	PAHO staff: headquarters, subregional, and country teams Partners at headquarters, subregional, country offices (including governments) Documents: including needs assessments, design, response, progress	Document review Key informant interviews (PAHO, Member State staff, and partners at headquarters, subregional offices, country offices) Online survey (PAHO staff, Member State staff)
	1.2. To what extent has PAHO's COVID-19 response addressed Member States' overall priorities and has been aligned with national response plans?	The extent to which PAHO's response is aligned with national response plans and has addressed Member States' priorities	PAHO staff: country teams Partners at country offices (including governments) Documents: progress reports and updates	Document review Key informant interviews (PAHO and Member State staff, and partners at country offices) Online survey (PAHO country offices staff, Member State staff)
	1.3. To what extent has PAHO's response included measures to ensure equity in Member States' national responses?	The extent to which PAHO's response is inclusive of vulnerabilities, including gender, disability, etc.		
	1.4. Which PAHO strategic lines of action or cooperation modalities during the response to the pandemic do Member States and other local, country-based partners consider most relevant?	Perceptions of Member States on PAHO's strategic lines of action/ cooperation		

(Continued)

OECD-DAC CRITERIA	EVALUATION QUESTIONS AND SUBQUESTIONS	INDICATORS	SOURCES OF INFORMATION	DATA COLLECTION METHODS
	1.5. How has PAHO adapted its response during various phases of the pandemic?	Perceptions of Member States and PAHO personnel	PAHO staff: headquarters, subregional, and country teams Partners at headquarters, subregional, country offices (including governments) Documents: including needs assessments, design, response, progress	Document review Key informant interviews (PAHO, Member State staff, and partners at headquarters, subregional offices, country offices) Online survey (PAHO staff, Member State staff)
2. Coordination	2.1. How has PAHO engaged with partners, including other United Nations agencies, regional, subregional, and country-level institutions, academia, NGOs, CSOs, and the private sector to ensure a focus on national needs? (Differentiate between perspectives on partnerships for the emergency response and partnerships with recovery and building resilient health systems)	Types/number of partnership agreements documented	PAHO staff: headquarters, subregional, country offices Partners at headquarters, subregional offices, country offices Documents: related to partnership agreements	Document review Key informant interviews (PAHO and partners at headquarters, subregional offices, country offices)
	2.2. How well has PAHO coordinated its response with partners (the United Nations, donors, NGOs, CSOs) to ensure a timely and cost-effective response and avoid duplication?	Perceptions of stakeholders on PAHO's ability to coordinate the response (efficiently and effectively)		

(Continued)

OECD-DAC CRITERIA	EVALUATION QUESTIONS AND SUBQUESTIONS	INDICATORS	SOURCES OF INFORMATION	DATA COLLECTION METHODS
3. Effectiveness	3.1. To what extent did PAHO's COVID-19 response achieve its intended outcomes as per the Strategic Plan (including demonstrated capabilities to adjust its objectives according to changes in circumstances, contexts, and assumptions)?	Number of planned targets achieved	Secondary data (PAHO) Documents	Analysis of monitoring and performance data Document review
	3.1.1 Which activities have been most effective / least effective? Why?	Stakeholder perceptions about activities and their effectiveness	PAHO and Member State staff, partners	Key informant interviews (PAHO and partners at headquarters, subregional offices, country offices, Member States) Staff/Member State survey
	3.1.2 What have been the main factors (internal) that compromised PAHO's response?	List of factors/ challenges outlined by key stakeholders perceived to be impeding PAHO's response (differentiated across countries and subregions)		
	3.2 What have been the most significant challenges (external) to emerge in responding to COVID-19 across countries and subregions?	List of factors/ challenges outlined by key stakeholders perceived to be impeding PAHO's response (differentiated across countries and subregions)		

(Continued)

OECD-DAC CRITERIA	EVALUATION QUESTIONS AND SUBQUESTIONS	INDICATORS	SOURCES OF INFORMATION	DATA COLLECTION METHODS
4. Efficiency	4.1 How well did PAHO adapt by repurposing to respond to the COVID-19 emergency in terms of use of time, resources, and the timeliness of the delivery of products and services?	The extent to which response was delivered on time and with required resources	Documents (workplans, budgets, HR) PAHO staff (headquarters, subregional offices, country offices)	Document review Financial analysis Key informant interviews (PAHO staff headquarters, subregional offices, country offices)
	4.1.1 How did this affect PAHO's regular program delivery (including the effects of the financial crisis and PAHO's ability to mobilize resources and cover some of the essential functions without funding)?	Perceptions of stakeholders on the effect of the COVID-19 response on regular programming/ achievements against planned targets	PAHO staff (headquarters, subregional offices, country offices) Secondary data (PAHO) Documents	Key informant interviews (PAHO staff headquarters, subregional offices, country offices) Document review Analysis of secondary data (regular programs)
	4.1.2 What organizational arrangements and procedures worked well / less well to deliver on time and budget?	Perceptions of stakeholders regarding PAHO processes and procedures	PAHO staff (headquarters, subregional offices, country offices)	Key informant interviews (PAHO staff headquarters, subregional offices, country offices) Staff survey
	4.2. To what extent have PAHO duty-of-care measures contributed to protecting the health and well-being of PAHO staff and to ensuring the continuity of PAHO's support?	Perceptions of PAHO staff on measures to promote well-being		
	4.3 What factors influenced PAHO's ability to rapidly mobilize support for the pandemic response (facilitating and hindering factors)?	List of factors outlined by stakeholders as facilitating/ hindering PAHO response		

(Continued)

OECD-DAC CRITERIA	EVALUATION QUESTIONS AND SUBQUESTIONS	INDICATORS	SOURCES OF INFORMATION	DATA COLLECTION METHODS
5. Sustainability	5.1. What pandemic preparedness actions and response measures supported by PAHO were shown to be effective in previous outbreaks in the Region and during the pandemic, and have the potential to strengthen health systems over time?	Stakeholder perceptions on measures effective in past responses	PAHO staff (headquarters, subregional offices, country offices) Secondary data Documents	Key informant interviews (PAHO/ Member State staff headquarters, subregional offices, country offices) Document review Analysis of secondary data
	5.2. What was the level of uptake by Member States of PAHO's Technical Cooperation in pandemic response?	Member States' perceptions on the extent of uptake of PAHO's Technical Cooperation	Member State staff	Key informant interviews (Member State staff)
	5.3. To what extent is PAHO's response contributing to equitable, resilient and sustainable health systems?	Examples of PAHO's contribution to equitable, resilient, and sustainable health systems	PAHO/Member State staff (headquarters, subregional offices, country offices)	Key informant interviews (PAHO/ Member State staff headquarters, subregional offices, country offices)
	5.4 To what extent can some of PAHO's interventions implemented during the emergency be applied to nonemergency periods and programs?	Examples of PAHO interventions that are perceived to be applicable during regular programming periods	PAHO staff (headquarters, subregional offices, country offices)	Key informant interviews (PAHO staff headquarters, subregional offices, country offices)

(Continued)

OECD-DAC CRITERIA	EVALUATION QUESTIONS AND SUBQUESTIONS	INDICATORS	SOURCES OF INFORMATION	DATA COLLECTION METHODS
6. Added value	6.1. What have been PAHO's unique contributions during the response to the COVID-19 pandemic (specifically in relation to the effects of its technical support to Member States)? 6.2 In which areas did PAHO technical support to Member States excel or make a difference?	Examples/ perceptions of PAHO's unique contribution during the response	PAHO/Member State staff (headquarters, subregional offices, country offices)	Key informant interviews (PAHO/ Member State staff headquarters, subregional offices, country offices) Staff survey (PAHO/ Member States)
7. Lessons and best practices	7.1. What patterns and trends have been observed in Member States' responses, and what Member States' successes in policies and practices constitute lessons to be learned? 7.2 What lessons and best practices (efficient practices and significant gaps) have been emerging from PAHO's implementation of the COVID-19 response? 7.3. What areas emerge, based on the Resilience Framework, that PAHO could take into consideration as it continues to build national capacities at the individual and organizational levels?	List of lessons learned and best practices	Documents PAHO/ Member State staff Partners	Key informant interviews (PAHO/ Member State staff headquarters, subregional offices, country offices/ partners) Staff survey (PAHO/ Member States) Document review

3.5. Methodological approach

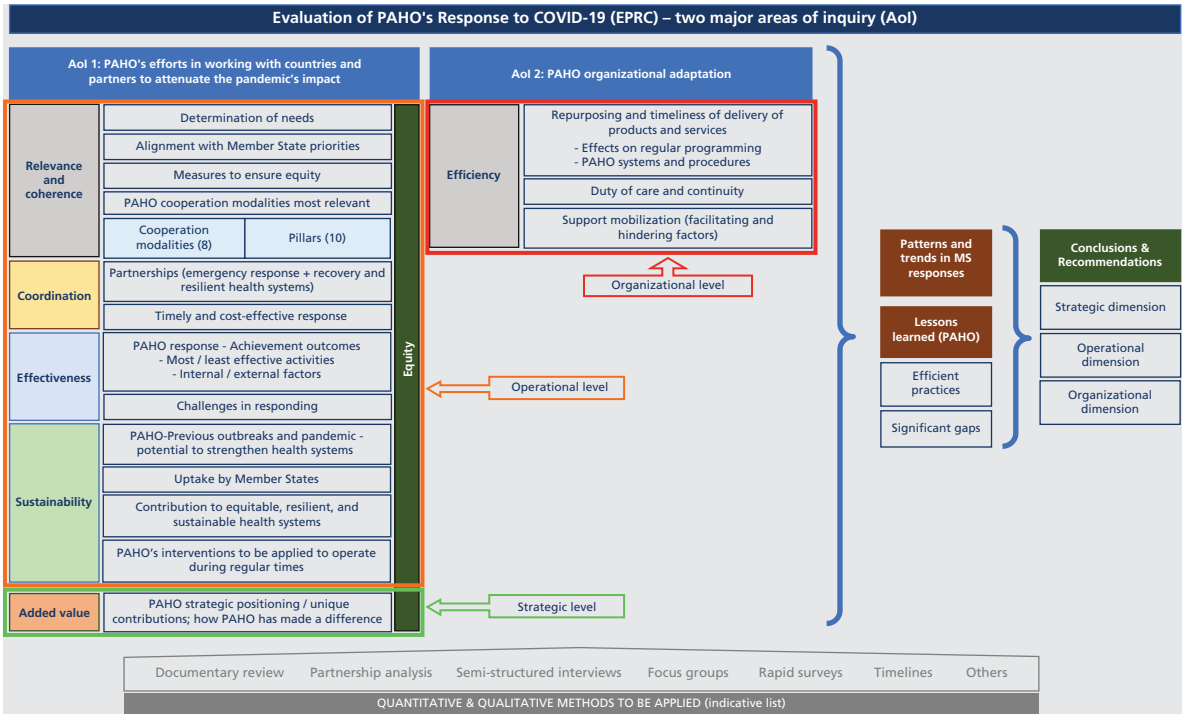
The evaluation design combined two major areas of inquiry and three levels of analysis (see Annex Figure 14), grouping the evaluation questions.

The first area of inquiry corresponded to the assessment of PAHO's efforts in working with countries and partners to attenuate the effect of the pandemic. The purpose was to gather external perceptions of key actors and to assess PAHO's performance in its role as a technical cooperation agency: an agency that engages with Member States to address priority public health issues by providing strategic and technical assistance, developing norms and standards, conducting research, monitoring the health situation, and building capacity in the Region. This first area of inquiry included the evaluation criteria of relevance, coherence, coordination, effectiveness, sustainability, and added value. It used the PAHO COVID-19 response strategy and related monitoring and evaluation frameworks as major references during the evaluation.

The second area of inquiry aimed to assess internal adaptive capacity (in terms of human resources, systems, procedures and tools, and financial resources) to operate within a pandemic and to assess internal perceptions about PAHO's performance. This included the evaluation criteria of efficiency and sought to assess the adaptive organizational capacity (adaptation) of PAHO to operate under an unexpected epidemic context and the imposed stringent restrictions (in terms of internal policies, procedures, and systems specifically put in place to respond to the pandemic).

In addition, the evaluation considered three different (but interrelated) levels of analysis: strategic, operational, and organizational. The strategic level of analysis corresponds to the "added value" of PAHO supporting Member States in their responses to COVID-19. It seeks to identify at which levels PAHO has made a unique

Annex Figure 14. Evaluation design



Source: Developed by the Evaluation Team for the EPRC.

contribution during the COVID-19 response and in which areas PAHO technical support to Member States has excelled. The operational level of analysis corresponds to PAHO's performance (e.g., which PAHO roles and activities have been the most effective or least effective and explanatory factors). The organizational level seeks to determine the extent to which different levels of the organization worked coherently (complementing efforts and avoiding duplications – "whole-of-PAHO response") and contributed to achieving optimal results efficiently.

The principle of equity (encompassing a human rights approach, gender lens, and specific vulnerabilities) was assessed as a "crosscutting" component of PAHO's response to the needs of countries and affected groups (see section 3.8 on ethical considerations).

The evaluation design was informed by real-time assessments that reinforce the learning approach adopted for the EPRC. Real-time evaluations often find program teams under stress at all levels of the organization, overwhelmed by the intensity of sustained large-scale operations. In these circumstances, creating an open and conducive space for internal learning is a challenge. The Evaluation Team was aware of the high burden and fatigue experienced by PAHO teams during the humanitarian response and therefore adopted a supportive role and constructive approach through "light footprint" and "appreciative inquiry" data collection methods. These aimed to recognize the efforts made and identify what has worked well or less well, the challenges faced, and how to leverage learning from this evaluation to inform change. The evidence gathered was presented as the basis for promoting adaptive management in PAHO and for answering three simple but essential questions: (1) Why adapt?; (2) What to adapt?; and (3) How to adapt?

3.6. Data collection methods and sample

The evaluation used mixed methods to collect qualitative and quantitative primary data, and it analyzed secondary data to address the evaluation questions. The advantages of using mixed methods over a single method are that it offers an opportunity to explore issues in depth and provides a broader perspective, as information is available from multiple sources. This made triangulation of findings possible and facilitated a deeper understanding of the processes, approaches, perceptions, and behaviors that have contributed to PAHO's achievement and/or nonachievement of results and targets. The evaluation relied on remote data collection.

The evaluation used the following methods to collect data:

- In-depth desk review of key documentation;
- Analysis of existing secondary data (e.g., monitoring and reporting data), including any available data on the performance of national health systems, for lesson-learning;
- Semi-structured key informant interviews (KIIs) with internal and external stakeholders and national counterparts (individual as well as group interviews where appropriate);
- Online surveys with PAHO personnel at all levels of the Organization (headquarters, including technical and enabling teams, subregions, and country offices, which included PAHO/WHO Representatives [PWRs] and COVID-19 response focal points);[7]
- Reconstructing response timelines;
- In-depth country/subregion analysis (for six countries and two subregions) for exploration of key issues.

7 Previously it was proposed to have a survey with representatives from Member States (government counterparts) from the six in-depth country analyses, but during the collection phase there were difficulties in accessing these stakeholders, and due to time constraints and challenges, the perspectives of these actors were reflected in the interviews of the study countries.

Each of these methods is described in more detail below.

Document review

The Evaluation Team compiled a comprehensive set of documents for analysis (from the regional, subregional, and country levels). All documents were collected and uploaded to a common SharePoint repository for access by all team members. The SharePoint repository ultimately hosts all relevant documentation for the evaluation.

A preliminary desk review was conducted to understand PAHO's response to COVID-19 and working contexts during the inception report phase. The Evaluation Team undertook further document review in order to address the evaluation questions. In total approximately 100 documents were reviewed. Annex Table 12 highlights some of the most significant types of documents that were collected and reviewed during the evaluation, including strategic plans and policies.

Annex Table 12. EPRC indicative types of documents to be further reviewed

TYPE	DESCRIPTION
Key COVID-19-related documents	• Response plans and implementation documents (including PHE team activities, etc.) • Workplans (headquarters, country, and subregional levels) • Strategies/technical papers • Progress reports (annual, quarterly) • Monitoring data/reports/COVAX (headquarters, country, and subregional level)
Partnerships and donors	• List of national, subregional partners, and partners at headquarters level (Washington, D.C.) for the COVID-19 response (including their roles and responsibilities) • Major donors
Financial information	• PAHO budgets at headquarters, country, and subregional levels (prior to pandemic, COVID-19 budgets annually, and any changes)
HR information	• Staffing at headquarters, country, and subregional levels (pre-COVID-19 and during COVID-19)
Organizational information	• Country and subregional offices information/organograms (at least of those countries that are selected for inclusion in the evaluation)
Past COVID-19 evaluations	• Evaluation reports by PAHO, WHO, or any other organization that may seem relevant, including and if available the ongoing PAHO evaluation of HRH/ health systems
Strategic documents	• PAHO's policy and standard operating procedures on emergency response • Reports of Governing Bodies' sessions during the period of the evaluation • PAHO Strategic Plans • June 2020 Internal Steering Committee minutes • Organizational Development Initiatives • People Strategy (2020–2025) • 59th Directing Council (Sep 2021) (Protect, Recover, Build Stronger) minutes • PAHO evaluation Policy (Accountability and Transparency) • 30th Pan American Sanitary Conference 74th Session of the Regional Committee of WHO for the Americas • 170th Session of the Executive Committee

(Continued)

TYPE	DESCRIPTION
Needs assessments and progress reports	• Situation reports from country offices (on COVID-19) • 2020 and 2021 Annual Report of the Director • 2020–2021 end-of-biennium report (under development by PBE) • Performance, monitoring, and assessment reports (2020–2021)
Audit reports	• Audits of past or ongoing activities/interventions

Semi-structured key informant interviews

The Evaluation Team conducted 112 key interviews with 124 participants (58% male and 42% female), with PAHO personnel and counterparts/partners working with PAHO (Annex Table 13 presents the categories of respondents for KIIs and surveys). Purposive sampling was used to select the initial sample of key informants, and then snowball sampling was applied as appropriate.[8]

An interview protocol was developed with a limited number of core questions that were guided by the overall evaluation questions. Limiting the interview protocol to a small number of well-phrased, open-ended questions enabled interviewers to direct the interview to topics that were most pertinent and relevant to the respondent (see Annex 4. Data collection tools). The data collected from interviews were used to triangulate and validate the findings from the desk review, surveys, and secondary data sources. The interviews addressed the relevant questions and were conducted with stakeholders that were and have been involved in the response and have relevant knowledge, insights, and perspectives. As the interviews were semi-structured, they also provided respondents with space to discuss unanticipated issues.

The draft (but complete) interview protocols were submitted to PAHO's Ethical Review Committee, and after approval exemption was obtained from the PAHO Ethical Review Committee Secretariat in June 2022. This enabled the Evaluation Team to test, revise, and use these protocols, as well as to translate them into French, Spanish, and Portuguese. This ensured that the data collection process was inclusive, and the tools were easily accessible to all respondents.

The interviews were conducted remotely, recorded (where possible), and transcribed, or notes were taken by the Evaluation Team. Before conducting and recording interviews or taking notes, verbal informed consent was taken. Participation in interviews was voluntary, and respondents were briefed about confidentiality and anonymity. They were given the opportunity to ask questions, and they could refuse to participate should they wish to do so.

Annex Table 13 provides information about interview respondents, interview format, and agreed sample (Annex Table 20 provides details of the categories of respondents for KIIs and surveys).

8 Snowball sampling means that people who are initially interviewed are asked to nominate others as potential respondents for the evaluation.

Annex Table 13. Category of respondents for key informant interviews, format, and sample

CATEGORY OF RESPONDENTS[a]	DESCRIPTION	FORMAT	SAMPLE EXPECTED	INTERVIEWS CONDUCTED
Counterparts/partners	Academic and research institutions; nongovernmental organizations (national/international); philanthropic foundations; donors (cash & in-kind); United Nations agencies (UNDP, UNHCR, WHO, UNICEF); private sector/media and other partners at international, national, and subregional levels, including Canada and United States	Online	52 (some from the country level and others from the international level)	35 (some from the country level and others from the international level)
Partners in vaccines COVAX	UNICEF LAC representative; vaccine manufacturers; COVAX donor countries; PAHO/WHO Regional Revolving Funds (RRF)	Online	4	6
Member States (government)	Representatives from countries selected for in-depth analysis (Barbados; Brazil; Guatemala; Haiti; Mexico; Peru) such as MoH political/institutional high-level decisionmakers (e.g., general directors, cabinet, ministers) and other ministers / public bodies with direct responsibility for high-level political/institutional COVID-19 responses (e.g., foreign affairs, economy)	Online	24 (2–4 per country)	17
PAHO country representatives (PWRs)	Representatives from countries selected for in-depth analysis: Barbados; Brazil; Guatemala; Haiti; Mexico; Peru[b]	Online	6 (1 per country)	8 (1 former PWR from Peru and 1 PWR from Panama)

(Continued)

CATEGORY OF RESPONDENTS[a]	DESCRIPTION	FORMAT	SAMPLE EXPECTED	INTERVIEWS CONDUCTED
PAHO staff (headquarters)	PAHO headquarters – executives and senior management team Health Emergencies (PHE); External Relations, Partnerships and Resource Mobilization (ERP); Communications (CMU); Family, Health Promotion and Life Course (FPL); Communicable Diseases and Environmental Determinants of Health (CDE); Evidence and Intelligence for Action in Health (EIH); Noncommunicable Diseases and Mental Health (NMH); Health Systems and Services (HSS); Financial Resources Management (FRM); Human Resources Management Procurement and Supply Management; Country and Subregional Coordination	Online and face-to-face where possible	19	31
PAHO staff (subregions)	Senior management and selected technical staff	Online	4	3
Contingent workers	Staff involved in the response who are non-PAHO staff from countries selected for in-depth analysis (Barbados; Brazil; Guatemala; Haiti; Mexico; Peru)	Online	12 (1–2 per country)	12
Total			**~120**	**112**

[a] Representatives from the United States and Canada were interviewed to ascertain their role in supporting PAHO during COVID-19, as well as how they have been supported by the organization to respond to the pandemic.
[b] These are the same countries that were assessed in the in-depth country analysis.

Survey

A quantitative online[9] perception survey was administered at the same time as the key informant interviews (due to tight evaluation timelines). Surveys are a method of gathering quantitative data used to generalize the results from the study population. Surveys were administered to a larger sample to complement other data sources, and they provided a broader level of understanding concerning PAHO's COVID-19 response and preparedness (Annex Table 14). The Evaluation Team worked closely with PAHO HR to finalize the survey, which was administered using PAHO's online Gallup platform and Kobo. Two surveys were administered: one for all PAHO personnel (with only closed-ended questions), and the other for the COVID-19 focal point and PWRs, with closed-ended questions as well, but also with some open-ended questions, allowing respondents the freedom and space to provide further information and clarify their responses as necessary.

9 On the IR, it was established to do a telephone survey to some stakeholders, but it could be handled online.

Annex Table 14. Category of respondents for surveys, format, and sample

LEVEL	SCALE	FORMAT	PROPOSED SAMPLE	NUMBER
PAHO country focal point responsible for COVID-19 coordination & PAHO country representatives (head of office – PWR)	All countries	Online Kobo survey	35 (one per country), those that are not based in the six countries selected for in-depth analysis)	27
PAHO personnel at headquarters, subregion, and country level	All subregions, countries, headquarters and some categories of contingent workers	Online Gallup survey	All personnel[a]	947 (42% of all PAHO personnel)
Total			**~ 2300**	**974**

[a] Except interns, outside providers, volunteer-local, and volunteer-United Nations.

Previously it was proposed to have a survey with representatives from Member States (government counterparts) from the six in-depth country analyses, but during the collection phase there were difficulties in accessing these stakeholders, and due to time constraints and challenges, such as ministry of health (MoH) staff turnover and election period in some countries during the data collection, including Brazil. Therefore, the perspectives of these actors were reflected in the interviews of the study countries.

The survey tools are provided in Annex 4.3. The survey respondents were:

- PAHO personnel, to collect data related to perceptions regarding PAHO's performance during the COVID-19 response and personnel well-being (all staff across headquarters, subregions, and country offices). This survey was administered online with a closed-ended question (through the Gallup platform).
- PAHO country focal points responsible for in-country COVID-19 coordination. This was administered online but with a different tool to collect some qualitative information via open-ended questions (through the Kobo platform).
- PAHO country representatives, to collect data regarding PAHO's performance during the COVID-19 response and perceptions of well-being (through the Gallup platform).

The survey was short to reduce the burden on respondents (it took less than 25 minutes to complete), and it was pretested to increase reliability and validity. The identified problems were addressed, and the survey was revised before launch with PAHO's support.

The surveys were open from 11 July to 1 September, and regular reminders were sent out. It was sent to 2290 PAHO personnel (1363 female and 927 male) and received a total of 27 respondents from Kobo and 945 from Gallup – a total of 972, representing 42% of PAHO personnel. From those, 868 (314 male and 554 female) were eligible to respond to the surveys as they had worked in the Organization in 2020 and/or 2021.

Reconstructing timelines

The Evaluation Team used data collected from multiple sources to visually show the sequence of COVID-19 response activities and various phases of the pandemic. This method uses multiple sources of data to summarize various elements – in this case, elements of the COVID-19 pandemic response – in a cohesive format that is likely to be familiar to various audiences. In the context of a mixed-methods approach to evaluating the pandemic response, a timeline enabled the Evaluation Team to configure the data to communicate a holistic story, complete with context and chronology. The COVID-19 response has not been simple or linear but showing its progression in a timeline helped to convey this. Showing this sequence helped to evince probable causes and effects and identify patterns, progression, and critical moments.

In-depth country analysis

Using in-depth country analyses, the Evaluation Team was able to compare and contrast PAHO responses. For example, for types of strategies and activities used to tackle the pandemic, identifying what worked well, why, how, for whom, and in what type of geographical, administrative, etc. contexts. These were used to examine the relevance, appropriateness, and effectiveness of COVID-19 response operations in more detail. By developing a country-based in-depth analysis, the Evaluation Team obtained in-depth insights into strategies and activities adopted for responding to the COVID-19 crisis. Country-based analyses were designed to leverage both contextual and institutional knowledge from within each of the countries.

The in-depth country analyses varied in terms of contexts, barriers, interventions, structures, and geographical location. Variation along these dimensions provided the greatest coverage and the best chance of identifying patterns of difference or similarity in terms of the extent to which PAHO's strategies and interventions have been effective and contributed to delivering results. Due to the low number of in-depth country analyses conducted (compared with the scale of the COVID-19 response), it is unlikely that the results were generalized more broadly. They were not designed to support a comparative analysis of the specific characteristics of the response in each country. For this reason, they were supplemented by data collected via online surveys, desk reviews, interviews, and analysis of secondary data. The data collected from the in-depth country analyses were used to inform the evaluation report. Individual in-depth country analysis reports were not produced; only an overview that emerged from each country.

The evaluation identified a sample of six countries to enable in-depth country analysis. The selection of these countries was developed by applying five specific criteria, as shown in Annex Table 15.

Annex Table 15. In-depth country analysis selection criteria

CRITERIA	DESCRIPTION
The need for geographic balance in the Americas, including at least one **Small Island Developing State and federal countries**	One country from each of the five PAHO subregions in the Americas. The Evaluation Team considered the subregions as Andean Area, Central America, Caribbean, North America, and Southern Cone.
The need to ensure an adequate representation across different **national income levels**	Countries with low-income economies; lower-middle income economies; upper-middle-income economies; high-income economies, as categorized by the Work Bank[a]
The need to ensure the inclusion of countries with **different population sizes**	Countries with smaller, medium, and larger population sizes.

(Continued)

CRITERIA	DESCRIPTION
The need to ensure the inclusion of countries where **PAHO offers support**	PAHO provides countries technical cooperation, and/or technical assistance.
The need to include PAHO priority countries and **countries that are a special case**	These are: Belize, Bolivia (Plurinational State of), Guatemala, Haiti, Honduras, Guyana, Nicaragua, and Paraguay

[a] Low-income economies (USD 1045 or less); lower-middle-income economies (USD 1046 to USD 4095); upper-middle-income economies (USD 4096 to USD 12 695); high-income economies (USD 12 696 or more). World Bank Country and Lending Groups. Available from: https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups.

Based on PAHO definitions, Annex Table 16 presents the PAHO countries and their respective regions and subregions.

The following are the six countries that met all criteria and were used for in-depth analysis (further details are described in Annex Table 17).

- North America – Mexico;
- Central America – Guatemala;
- Caribbean – Barbados;
- Andean Area – Peru;
- Southern Cone – Brazil;
- Special case country – Haiti.

In addition, the evaluation differentiated between the technical cooperation role and the technical assistance role, taking into account the role played by Canada and the United States. There was a particular focus on identifying support and collaboration between Canada, the United States, and PAHO to respond to the pandemic in the region. Panama acted as a logistics hub and was included on this basis as a case for analysis.

Annex Table 16. PAHO countries and territories by region and subregion

COUNTRY	REGION	SUBREGION
Canada	North America	
Mexico	North America	
Puerto Rico	North America	
United States	North America	
Bolivia (Plurinational State of)	South America	Andean Area
Colombia	South America	Andean Area
Ecuador	South America	Andean Area
Peru	South America	Andean Area
Venezuela (Bolivarian Republic of)	South America	Andean Area
Argentina	South America	Southern Cone
Brazil	South America	Southern Cone
Chile	South America	Southern Cone
Paraguay	South America	Southern Cone
Uruguay	South America	Southern Cone
Belize	Central America	
Costa Rica	Central America	
Cuba	Central America	
Dominican Republic	Central America	
El Salvador	Central America	
Guatemala	Central America	

(Continued)

COUNTRY	REGION	SUBREGION
Honduras	Central America	
Nicaragua	Central America	
Panama	Central America	
French Guiana	Caribbean	Latin Caribbean
Guadeloupe	Caribbean	Latin Caribbean
Haiti	Caribbean	Latin Caribbean
Martinique	Caribbean	Latin Caribbean
Anguilla	Caribbean	Non-Latin Caribbean
Antigua and Barbuda	Caribbean	Non-Latin Caribbean
Aruba	Caribbean	Non-Latin Caribbean
Bahamas	Caribbean	Non-Latin Caribbean
Barbados	Caribbean	Non-Latin Caribbean
Cayman Islands	Caribbean	Non-Latin Caribbean
Dominica	Caribbean	Non-Latin Caribbean
Grenada	Caribbean	Non-Latin Caribbean
Guyana	Caribbean	Non-Latin Caribbean
Jamaica	Caribbean	Non-Latin Caribbean
Montserrat	Caribbean	Non-Latin Caribbean
Netherlands Antilles	Caribbean	Non-Latin Caribbean
Saint Kitts and Nevis	Caribbean	Non-Latin Caribbean
Saint Lucia	Caribbean	Non-Latin Caribbean
Saint Vincent and the Grenadines	Caribbean	Non-Latin Caribbean
Suriname	Caribbean	Non-Latin Caribbean
Trinidad and Tobago	Caribbean	Non-Latin Caribbean
Turks and Caicos Islands	Caribbean	Non-Latin Caribbean
Virgin Islands (UK)	Caribbean	Non-Latin Caribbean

Annex Table 17. In-depth country analysis (criteria and sample)

COUNTRY	SUBREGION	INCOME	PAHO SUPPORT	PRIORITY COUNTRY	SPECIAL SITUATION
Barbados	Caribbean and Small Island Developing States	High-income	–	No	No
Brazil	Southern Cone	Upper-middle-income	Technical cooperation	No	No
Guatemala	Central America	Upper-middle-income	Technical assistance	Yes	No
Haiti	Caribbean	Lower-middle-income	Technical assistance	Yes	Yes
Mexico	North America	Upper-middle-income	Technical cooperation	No	No
Peru	Andean Area	Upper-middle-income	Technical cooperation	No	No

3.7. Data analysis

The evaluation framework guided the analytical process to address the key evaluation questions and criteria. The analytical process focused on reviewing the data collected and recording the frequency of the same/similar responses. High-level strategic findings for each question and criterion drove key conclusions and helped formulate corresponding recommendations. The survey data were analyzed to provide broader trends in relation to the questions, while the qualitative data complemented these and provided nuance.

Data analysis was based on notes collected and recordings made during the document review, semi-structured interviews, surveys, in-depth country analysis, and working meetings. The information collected was populated in a metafile to help find similarities/differences and frequencies around each evaluation question to identify key findings that informed conclusions and recommendations. A team-based approach to analysis and triangulation helped ensure a balanced and corroborated interpretation of data for each evaluation question. Regular working sessions of the Evaluation Team were scheduled to validate each evaluator's individual findings and judgments.

Methods of analysis included the following:

Thematic analysis of qualitative data: A coding framework was developed based on the high-level evaluation questions. The coded data were categorized, and the categories were determined by the codes. Developing and using a coding framework helped to ensure consistency across the Evaluation Team, thereby providing greater reliability of results. Quantitative data were analyzed using SPSS/Excel to generate descriptive statistics and cross-tabulation relating to each evaluation question when possible. With both the qualitative and quantitative data, it was possible to undertake triangulation. Triangulation involves using multiple quantitative and qualitative data sources from a wide range of stakeholders to produce a richer understanding of the topics being explored within the evaluation.

Data were analyzed to generate evidence to reach findings that informed the overall conclusions and recommendations for the evaluation report at three levels: strategic, operational, and organizational. Recommendations at these diverse levels responded to the following areas:

- **Strategic level – partnerships:** How could PAHO better engage with partners to ensure coordinated support toward addressing local priorities?
- **Operational level – technical support to Member States:** What could strengthen PAHO's ongoing response and the quality of the related service delivery by the Organization?
- **Programming:** What should be done differently to enhance COVID-19 response programming while addressing longer-term health needs or future emergencies? What, if any, changes could improve PAHO's response while addressing longer-term needs?
- **Organizational level: PAHO's public health emergencies governance and management systems/incident management support teams (IMST) –** What organizational arrangements and procedures might need to improve?

A preliminary analysis was undertaken to identify key highlights that informed a high-level summary for submission to, and presentation at, the 30th Pan American Sanitary Conference. This analysis focused on emerging strategic aspects that were more pertinent to this conference.

3.8. Ethical considerations

Evaluation principles

The evaluation embraces the key principles of PAHO's Evaluation Policy and is aligned with United Nations Evaluation Group (UNEG) Norms and Standards (2016) *(98, 99)*. The evaluation process followed the principles of impartiality, independence, transparency, credibility, beneficence, and professionalism to ensure that a high-quality evaluation was delivered that was utilization-focused to serve PAHO's information needs:

- **Impartiality:** The Evaluation Team presented findings objectively, describing strengths and weaknesses, and considering divergent views from a cross-section of relevant stakeholders. Concerted efforts were made to minimize biases and prevent distortions in reporting.
- **Independence:** The Evaluation Team consisted of highly experienced independent external evaluators and independent subject-matter experts and evaluation experts in public health and was managed by PBE. PBE was not involved in designing or implementing the COVID-19 response that was the object of the evaluation.
- **Transparency** was ensured through consultation with PAHO and by ultimately making evaluation products (reports and summaries) accessible to stakeholders, based on PAHO policy on dissemination.
- **Credibility** of the evaluation was ensured by employing a rigorous methodology that results in reliable and valid data to produce robust and evidence-based findings, conclusions, and recommendations.
- **Beneficence:** The evaluation abided by the "do no harm" principle throughout the process.
- **No conflict of interest:** The Evaluation Team ensured independence by not being involved in the implementation of the response or anything else that might have created a conflict of interest. Each member of the team provided a statement declaring that there was no conflict of interest.

Ethical considerations

The Evaluation Team followed PAHO rules and regulations and UNEG's Ethical Guidelines for Evaluation (2020) to fulfill obligations to respondents participating in this evaluation. In particular, the evaluation followed the guidance on the integration of gender equality and human rights principles as established in the UNEG Handbook, Integrating Human Rights and Gender Equality in Evaluation – Towards UNEG Guidance (2011).

- **Respect for dignity and diversity:** The Evaluation Team respected differences in culture, local customs, religious beliefs, gender, disability, age, and ethnicity, and the potential implications of these when carrying out this evaluation. They also minimized any risk of disruption to the respondents, provided ample notice, and respected their privacy.
- **Rights:** The Evaluation Team ensured that participants were treated as "autonomous agents" and were given the time and information to decide if they wished to participate, and they were not pressured into participating. The participants were selected as per the defined sampling methodology. The Evaluation Team complied with any codes of conduct governing vulnerable groups (if applicable).
- **Redress:** Participants provided sufficient information to seek redress and how to register a complaint. The mechanisms for redress were defined in coordination with PAHO/PBE.
- **Anonymity and confidentiality:** The Evaluation Team respected the respondents' right to provide information in confidence and made them aware of the scope and limits of confidentiality. Names and any other sensitive information were anonymized. The Evaluation Team ensured that the information used and cited in the evaluation report was not traced to its source. Each interviewee was assigned a unique identifier code known only to the Evaluation Team. No personal or organizational detail was identifiable.

- **Informed consent:** Stakeholders were informed of the purpose of the study, key topics for discussion, major data requirements, and ethical and confidentiality guiding principles of the assignment when contacted to schedule interviews. This brief introduction to the evaluation was intended to prepare the respondents and allow them to make an informed choice before committing to participate. At the beginning of each interview, participants were informed of the purpose and confidential nature of the meeting and of their right to refuse to answer any question they were uncomfortable with.
- **Data security:** Data were stored systematically and securely and in line with the data protection policy, and in ways that made it available and clearly accessible to the Evaluation Team only. Following appropriate anonymization, the data were also made available to PAHO/PBE. Data were retained for a period, as determined in consultation with PAHO, and then deleted upon approval from PAHO.
- **Responsibility:** The Evaluation Team ensured that any dispute or difference of opinion among the Evaluation Team or between the Evaluation Team and PAHO/PBE, in connection with the findings and/or recommendations, was clearly explained.
- **Integrity and independence:** The Evaluation Team ensured that any emerging issues and potential deviations were clearly discussed and agreed upon with PAHO. The Evaluation Team provided an independent judgment, free from bias. The Evaluation Team took full responsibility for the accuracy of the information presented in the report.
- **Intellectual property:** The Evaluation Team understands that all materials produced during the conduct of this evaluation are PAHO's property and can be used only with prior written permission.
- **Incidents:** The Evaluation Team reported any issues that arose through regular meetings with the PBE evaluation manager, without compromising principles of respect, anonymity, beneficence, and confidentiality.

Based on the scoping phase, the evaluation included a focus on the effects of COVID-19 on PAHO's human resources at different levels of the organization. The evaluation paid attention to all categories of PAHO staff, including contingency workers (who are not PAHO staff), adopting the ethical approaches and principles described above to ensure that the diversity of views was reflected in this evaluation.

3.9. Methodological limitations

Annex Table 18. Methodological limitations and mitigation measures

LIMITATION	DESCRIPTION	MITIGATION MEASURE
Fragmented or inexistent specific monitoring framework of PAHO's organizational performance during the pandemic	The COVID-19 Strategic Preparedness and Response Plan (SPRP) monitoring framework was primarily intended to support the monitoring of national response actions, enable their aggregation at subregional, regional, and global levels, and inform analysis and decisionmaking but not to assess the organizational performance of PAHO in its role of technical support to countries.	• The evaluation relied on other internal documents and interviews and reinforced the qualitative analysis of PAHO's response.

(Continued)

LIMITATION	DESCRIPTION	MITIGATION MEASURE
High PAHO staff turnover, including of PWRs and government COVID-19 focal points (see Annex 8. Turnover of PAHO/WHO Representatives)	PAHO/government staff turnover during the pandemic meant the evaluation did not obtain the views of all relevant personnel in some cases. PAHO personnel who left the Organization during the pandemic were not interviewed.	• The evaluation diversified the profiles of interviewees. • Questions related to PAHO personnel benefited from additional data from the HR department.
Some degree of bias in identification of respondents for key informant interviews (KIIs)	There was some degree of bias in the identification of respondents for KIIs and the initial stakeholder mapping.	• The evaluation broadened the sources of secondary information, including a larger and more diverse sample of external informants. Snowball sampling was used to further identify respondents.
Moderate response rate from online surveys	The response rate to online surveys was higher than expected but slightly lower than envisaged.	• A larger sample size was used, the survey was kept short, and conducted online. In the case of PAHO staff, the Evaluation Team saw support from headquarters and country offices to remind and motivate staff to respond. • The response time was increased to 2 weeks, and frequent reminders were sent in coordination with PAHO.
Short timelines, ongoing COVID-19 response, and overlapping public health emergencies may hamper the evaluation	The evaluation was conducted within a short time, with PAHO teams and counterparts responding to the COVID-19 pandemic. PAHO teams experienced additional operational pressure since they had to respond to other outbreaks in the Region and disasters.	• Adjustments in the workplan were agreed with PAHO. The Evaluation Team provided PAHO with preliminary findings to help inform its ongoing response and related planning process.
Summer break (July/August)	Many PAHO staff were on vacation during the months of July and August, which was the data collection period.	• The Evaluation Team was flexible and adapted to the stakeholders' agenda. It also extended the data collection schedule of the survey to receive more responses.

3.10. Quality assurance

Internal quality assurance (QA) of all evaluation products was done by the co-team leader, who had experience and expertise in performing QA on evaluation products. The Evaluation Team ensured that the deliverables were produced on time, on budget, and to the desired quality. To ensure the quality of the evaluation products, the Evaluation Team followed PAHO's evaluation quality standards and guidelines as given in the 2021 Evaluation Policy and within PAHO's Evaluation Handbook (June 2022), in line with internationally established evaluation quality standards, in addition to the following.

Internal QA (within the Evaluation Team)

- Held regular internal project (evaluation) management meetings to track delivery and quality, and deal with problems as they arose;
- Compiled and documented in the project files relevant information (including meeting minutes, workplans and deadlines, program documentation, and relevant reports);
- Always maintained clear and open communication with PAHO/PBE;
- Sought feedback from PAHO/PBE and incorporated all feedback into the evaluation design, process, and outputs;
- Conducted an internal evaluation team review of all deliverables, including internal QA by the QA expert (and co-team leader) who held this responsibility within the Evaluation Team.

External QA (PAHO/PBE)

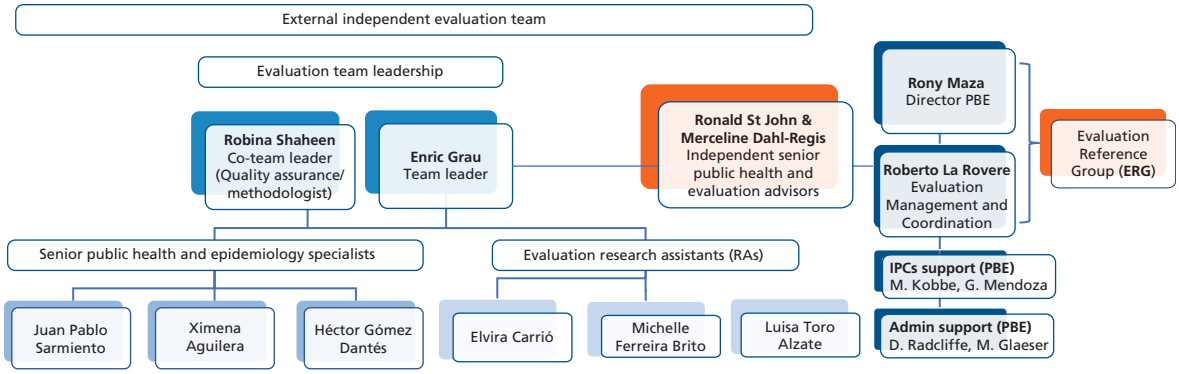
- The internal Evaluation Reference Group (ERG), as part of its advisory role, provided support, strategic feedback, and QA of inception and evaluation reports.
- The PBE Senior Evaluation Advisor (as the evaluation manager) was responsible for overseeing the evaluation process, working closely with the Evaluation Team. The advisor ensured that the evaluation met PAHO/PBE quality standards and followed QA processes as per the PAHO Evaluation Policy and the Evaluation Handbook.
- Senior public health and evaluation advisors: Within the limits of their time availability, the senior advisors provided guidance, expertise, and inputs during the evaluation, participating in selected high-level/targeted meetings and consultations. They helped with interpreting key findings, conclusions, and recommendations for the discussion and presentation of results to PAHO and reviewing key deliverables at key junctures in the evaluation process.
- Compliance with PAHO's Evaluation Handbook (2022), available on PAHO's intranet, and the PAHO Evaluation Policy (2022).

The Evaluation Team consisted of highly experienced evaluation and technical professionals who are respected in their fields and ensure high-quality products. The team leader and co-team leader ensured that all team members were adequately trained on data collection and undertook checks in order to ensure the collection of reliable and quality data. The senior members oversaw data quality. In addition, the evaluators refined and piloted the data collection tools, working closely with PAHO/PBE to ensure the reliability and high quality of the data.

3.11. Organization of the Evaluation Team

Composition and role of the Evaluation Team: The core Evaluation Team was composed of senior evaluation and subject-matter experts in public health, supported by a team of research assistants. The team leader led, oversaw, and guided the Evaluation Team, and presented and introduced the evaluation. The team leader acted in coordination with the co-team leader, who also oversaw methodological aspects and QA of evaluation deliverables. The structure of the Evaluation Team is given in Annex Figure 15.

Annex Figure 15. Evaluation Team structure



Further information regarding the roles and responsibilities of the Evaluation Team members is presented in Annex Table 19.

Annex Table 19. Roles and responsibilities of the Evaluation Team

TEAM MEMBERS	PRIMARY ROLE	SPECIFIC TASKS WITHIN THE EVALUATION[a]
Enric Grau	Team leader	Oversight of implementation of evaluation in coordination with the co-team leader; drafting of methodology, data collection tools, analytical framework, training for data collection, and data quality; undertake regular progress review meetings with PAHO and Evaluation Team; regular presentations to the Evaluation Reference Group (ERG) and other stakeholders; lead preparation of the evaluation deliverables
Robina Shaheen	Co-team leader (QA/ methodologist)	In addition to working with the team leader to ensure the above, undertake coordination with PAHO and Evaluation Team; develop and update workplan; manage/mitigate risks to evaluation; ensure evaluation is conducted on time; provide methodological oversight and QA of evaluation products
Juan Pablo Sarmiento	Senior subject-matter and evaluation specialist	Support development of data collection instruments; provide thematic inputs in relation to health systems, policies and practices, specifically focusing on COVID-19 response; support document review, design of data collection instruments; contribute to writing of evaluation report
Ximena Aguilera[b]	Senior subject-matter and evaluation specialist	Support development of data collection instruments; undertake data collection and analysis; contribute to writing of evaluation report; participate in Evaluation Team meetings and briefings with PAHO; provide thematic inputs
Héctor Gómez Dantés	Senior subject-matter and evaluation specialist	Support development of data collection instruments; undertake data collection and analysis; contribute to the writing of evaluation report; participate in Evaluation Team meetings and briefings with PAHO; provide thematic inputs

(Continued)

TEAM MEMBERS	PRIMARY ROLE	SPECIFIC TASKS WITHIN THE EVALUATION[a]
Elvira Carrió	Research assistant	Undertake document review, secondary data analysis; support setting up of primary data collection (KIIs and survey); undertake primary data collection; support analysis and report writing; participate in group meetings and briefings with PAHO
Michelle Ferreira Brito	Research assistant	Undertake document review, secondary data analysis; support setting up of primary data collection (KIIs and survey); undertake primary data collection; support analysis and report writing; participate in group meetings and briefings with PAHO
Luisa Toro-Alzate	Research assistant	Undertake document review, secondary data analysis; support setting up of primary data collection (KIIs and survey); undertake primary data collection; support analysis and report writing; participate in group meetings and briefings with PAHO
Ronald St. John and Merceline Dahl-Regis	Independent senior public health and evaluation advisors	Provide guidance, expertise, and inputs throughout the evaluation, including at design and analysis stages, as well as helping with interpreting key findings, and formulating conclusions and recommendations; provide advice on global literature and information about relevant respondents

[a] All members of the Evaluation Team were involved in data collection (via key informant interview/survey), analysis, and writing of the evaluation report.
[b] Ximena Aguilera supported the EPRC until end of August 2022.

Annex 4.
Data collection tools

4.1. Interview protocols

Introductory questions for every headquarters chief of unit and some key informant interviews (KIIs):

a. QIP – interview protocol – partners
b. QIHQ – interview protocol – PAHO headquarters
c. QIV – interview protocol – central topic vaccines (COVAX)
d. QIE – interview protocol – central topic Evidence-Based Portal (Evidence and Intelligence for Action in Health)
e. QIIM – interview protocol – central topic Incident Management Support Teams (IMST)
f. QIR – interview protocol – PAHO COVID-19 response
g. QIPSP – interview protocol central topic PAHO Strategic Plan
h. QIPRMS – PAHO representatives and Member States (government)

Introductory questions for every headquarters chief of unit and some KIIs

1. What were the most relevant **strengths** of PAHO and its performance that helped manage the COVID-19 pandemic (timing of the pandemic – before and after vaccination – variant)?
2. What were the most relevant **weaknesses** experienced during the management of the pandemic (timing of the pandemic – before and after vaccination – variant)?
3. What **policies, strategies, and decisions were implemented** during the pandemic that should be considered for use in future health emergencies?
4. What **policies, strategies, and decisions were not implemented** that should be considered for use in future health emergencies?
5. To what extent did PAHO's COVID-19 support to countries contribute to reinforcing equity across countries or at the subregional level?
6. To what extent did the **PAHO Strategic Plan 2020–2025 enable the Organization's response** to the COVID-19 pandemic?
7. To what extent was the **PAHO Strategic Plan affected by the pandemic** and the resulting political and economic environment?
8. Based on the lessons learned during the pandemic, which **components of the PAHO Strategic Plan should be reviewed and revised** in the short, medium, and long term?
9. To what extent can the **financial strategies** used to overcome the cancellation of contributions from Member States be maintained in the long term?
10. Do you have any further comments or information you would like to share with us?

a) QIP interview protocol – partners

For example, United Nations partners, other international organizations, donors, national counterparts (country level), and other regional partners. The interview protocol will be tailored according to the role of respondents and geographic level (national, regional, or international level).

QUESTION	EVALUATION DIMENSION
1. How do you define the partnership between your organization and PAHO?	Coordination
2. Why a partnership with PAHO? At which moment/circumstances did the partnership start?	Coordination
3. How did this partnership respond to the needs of the pandemic/ countries? To what extent has the partnership integrated/reinforced equity during the response (and how, if positive)?	Coordination, effectiveness
4. How has the partnership evolved during the pandemic?	Coordination
5. What was/was not achieved as a result of PAHO's response during the COVID-19 pandemic, particularly through the use of partnerships (strengths and weaknesses)?	Effectiveness, efficiency
6. What major challenges has PAHO faced in responding to the pandemic (in relation to working through partnerships)?	Effectiveness, efficiency
7. Which coordination / mutual accountability mechanisms were put in place between your organization and PAHO? Did the coordination / mutual accountability mechanisms work well?	Coordination, efficiency
8. How do you see the continuity/future of the partnership?	Coordination
9. What are the major challenges PAHO has faced in responding to the pandemic (under the context of the partnership)?	Effectiveness
10. What specific actions should be introduced to improve PAHO's performance, particularly in its working through partnerships?	Effectiveness, coordination
11. What should be done differently to improve partnerships and results/ achievements during the COVID-19 response while also addressing longer-term health needs or future emergencies?	Coordination

b) QIHQ – interview protocol – PAHO headquarters

For example, Director (D); Deputy Director (DD); Assistant Director (AD); Director of Administration (AM); Health Systems and Services (HSS); Noncommunicable Diseases and Mental Health (NMH); Evidence and Intelligence for Action in Health (EIH); Communicable Diseases and Environmental Determinants of Health (CDE); Health Emergencies (PHE); Family, Health Promotion and Life Course (FPL); Planning, Budget, and Evaluation (PBE); External Relations, Partnerships and Resource Mobilization (ERP); Equity, Gender and Cultural Diversity (EGC); Financial Resources Management (FRM); Human Resources Management (HRM); Procurement and Supply Management (PRO); Regional Revolving Funds (RRF); Country and Subregional Coordination (CSC); Communications (CMU).

QUESTION	EVALUATION DIMENSION
1. To what extent was PAHO's COVID-19 response aligned with national response plans?	Relevance

(Continued)

QUESTION	EVALUATION DIMENSION
2. To what extent did PAHO's COVID-19 support to countries contribute to reinforcing equity in national responses?	Relevance
3. **(Modalities of cooperation)** To what extent/on which level has PAHO assisted Member States in the following areas of cooperation *(interviewer to read these options out for the respondent*)? a. Institutional and political advocacy b. Technical assistance c. Education and training d. Epidemic intelligence, evidence generation, and dissemination e. South–South and triangular cooperation f. Communication g. Resource mobilization h. Logistics and supply chains	Relevance (including coherence), effectiveness, added value
4. **(10 pillars)** Which of the following topics/pillars of the PAHO strategic response plan have the potential to strengthen health systems over time and beyond the pandemic (*interviewer to read these options out for the respondent)*? a. Coordination, planning, financing, and monitoring b. Risk communication, community engagement, and infodemic management c. Surveillance, rapid response teams, and case investigation d. Points of entry, international travel, transport, and mass gatherings e. Laboratories and diagnostics f. Infection prevention and control, and protection of the health workforce g. Case management, clinical operations, and therapeutics h. Operational support and logistics, and supply chains i. Strengthening essential health services and systems j. Vaccination (since 2021)	Relevance, effectiveness, added value, sustainability
5. Focusing on those cooperation modalities (the How) and topics (pillars – the What) in which PAHO is strong, can you outline factors that may have facilitated these (facilitating factors)?	Relevance, effectiveness, added value
6. Focusing on those cooperation modalities (the How) and topics (pillars – the What), in which PAHO has encountered difficulties, can you outline factors that may have caused these difficulties or challenges (hindering factors)?	Relevance, effectiveness, added value
7. Is there a particular case or situation that you would like to highlight in the cooperation modalities (the How) and topics (pillars – the What) that has been essential in the response to the COVID-19 pandemic at the national level (PAHO's unique contribution, in which area has PAHO made a difference or performed remarkably well)?	Added value
8. What have been the most significant challenges experienced by PAHO when responding to COVID-19 across countries and subregions?	Effectiveness

(Continued)

QUESTION	EVALUATION DIMENSION
9. Which new partnerships have emerged during the pandemic (differentiating between the emergency response perspective and the recovery and building resilient health systems perspective if appropriate)? Should any of these new partnerships be continued to strengthen PAHO's activities during "normal" times?	Coordination
10. How has PAHO engaged with existing and new partners (United Nations agencies, regional institutions, academia, NGOs, CSOs, and the private sector) to ensure a focus on national needs?	Coordination
11. For each of the cooperation modalities and 10 pillars, what is the relevance (importance, pertinence) of PAHO's assistance *(interviewer to remind the respondent what the 10 topics are)*? Scope Geographical coverage Areas of expertise Logistical capabilities Capacity to adapt to a new situation Legal status	Coordination
12. (So far, we have talked about initiatives led by PAHO and implemented through other partners.) Was there any activity (regional or national) initiated/led by another United Nations agency, international organization or donor, in which PAHO collaborated (human rights, equipment, supplies)?	Coordination
13. How efficiently did PAHO adapt by repurposing to respond to the COVID-19 emergency (use of time, resources, and the timeliness of the delivery of products and services)?	Efficiency
14. How did this affect PAHO's regular program delivery?	Efficiency
15. What organizational arrangements and procedures did/ did not work well?	Efficiency
16. To what extent can some of PAHO's interventions implemented during the COVID-19 emergency be applied during "normal" times? Can you provide any examples?	Sustainability
17. What was the level of uptake by Member States of PAHO's technical cooperation (to develop individual or collective capacity through cooperative exchanges of knowledge, skills, resources, and technologies) during the pandemic response?	Sustainability
18. What pandemic preparedness actions and response measures supported by PAHO were shown to have worked well (effective) in previous outbreaks in the region and during the pandemic?	Sustainability
19. Can you give examples of policies or practices of the Member States that you consider were essential to the effective handling of the COVID-19 pandemic and that you would recommend being used during future public health emergencies?	Lessons and best practices
20. Can you mention policies or practices of your Member State that you believe caused serious difficulties in handling the COVID-19 pandemic, and that you would recommend be reviewed/revised/stopped for future public health emergencies?	Lessons and best practices

(Continued)

QUESTION	EVALUATION DIMENSION
21. Recommendations – in terms of (not exhaustive list): - Partnerships - Technical support to Member States – What could strengthen PAHO's ongoing response and the quality of the related service delivery by the Organization? - Programming – What should be done differently to enhance COVID-19 response programming while addressing longer-term health needs or future emergencies? - Organizational level: PAHO's public health emergencies governance and management systems/incident management support teams (IMST) – What organizational arrangements and procedures might need to improve?	Forward-looking perspective

c) QIV – Interview protocol – central topic Vaccines (COVAX)

For example, UNICEF LAC Representative, UNICEF COVAX POC, vaccine manufacturers, COVAX donor countries, PAHO/WHO Regional Revolving Funds (RRF).

QUESTION	EVALUATION DIMENSION
1. What has been achieved and what are the gaps as a result of COVAX (its performance) during the COVID-19 pandemic?	Effectiveness
2. What are COVAX's main strengths?	Effectiveness
3. What are the main weaknesses of COVAX?	Effectiveness
4. Is there any aspect of COVAX that should be implemented beyond the COVID-19 pandemic?	Sustainability
5. What specific actions should be introduced in the COVAX mechanism to adapt it for future challenges/emergencies?	Coordination, efficiency
6. How is the relationship between COVAX and Member States (countries)?	Coordination
7. How is the relationship/coordination between PAHO and other United Nations agencies and INGOs (in particular UNICEF, and Gavi) under the COVAX mechanism?	Coordination
8. In case you have not included the Expanded Programme on Immunization (EPI) at the national level in the previous answers, could you tell us about the role of the EPI during the pandemic, its performance with other non-COVID-19 vaccines, and its relationship with COVAX?	Effectiveness
9. Recommendations – In terms of (not exhaustive list): - Partnerships - Technical support to Member States – What could strengthen PAHO's ongoing response and the quality of the related service delivery by the Organization? - Programming – What should be done differently to enhance COVID-19 response programming while addressing longer-term health needs or future emergencies? - Organizational level: PAHO's public health emergencies governance and management systems/incident management support teams (IMST) – What organizational arrangements and procedures might need to improve?	Forward-looking perspective

d) QIE – interview protocol – central topic Evidence-Based Portal (Evidence and Intelligence for Action in Health)

For example, PAHO; WHO; Evidence and Intelligence for Action in Health (EIH); BIREME (BIR).

QUESTION	EVALUATION DIMENSION
1. What has been achieved and what are the gaps in Evidence and Intelligence for Action in Health's (EIH) performance during the pandemic?	Relevance
2. What were the EIH's main strengths?	Effectiveness
3. What were the main weaknesses of the EIH?	Effectiveness
4. Is there any aspect of the EIH that should be implemented in nonemergency times?	Effectiveness, relevance
5. What specific actions should be introduced in the EIH to adapt it for future challenges/emergencies?	Relevance
6. To what extent has the EIH been adopted by Member States?	Sustainability
7. Are there cases/situations/examples of good EIH performance in Member States that deserve to be highlighted?	Effectiveness
8. In case you have not included the Evidence-Based Portal in the previous answers, could you tell us about the role of the Evidence-Based Portal during the pandemic?	Relevance
9. What should be the role of the Evidence-Based Portal beyond the COVID-19 pandemic?	Relevance
10. Recommendations – In terms of (not exhaustive list): - Partnerships - Technical support to Member States – What could strengthen PAHO's ongoing response and the quality of the related service delivery by the Organization? - Programming – What should be done differently to enhance COVID-19 response programming while addressing longer-term health needs or future emergencies? - Organizational level: PAHO's public health emergencies governance and management systems/incident management support teams (IMST) – What organizational arrangements and procedures might need to improve?	Forward-looking perspective

e) QIIM – interview protocol – central topic Incident Management Support Teams (IMST)

For example, PAHO; WHO; Health Emergencies (PHE).

QUESTION	EVALUATION DIMENSION
1. How do you evaluate the role of the Incident Management Support Teams (IMST) during the COVID-19 pandemic (their views on the IMST role and how well/poorly it has performed during pandemic)?	Effectiveness
2. What were the IMST's main strengths?	Effectiveness
3. What were the main weaknesses of the IMST?	Effectiveness
4. Is there any aspect of the IMST that should be implemented in nonemergency times?	Effectiveness

(Continued)

QUESTION	EVALUATION DIMENSION
5. What specific actions should be introduced in the IMST to adapt it for future challenges/emergencies?	Effectiveness
6. To what extent has IMST been adopted by Member States / countries?	Sustainability
7. How is the IMST interface between PAHO and Member States / countries (how well/not well they have coordinated)?	Coherence, coordination
8. Recommendations – In terms of (not exhaustive list): - Partnerships - Technical support to Member States – What could strengthen PAHO's ongoing response and the quality of the related to service delivery by the Organization? - Programming – What should be done differently to enhance COVID-19 response programming while addressing longer-term health needs or future emergencies? - Organizational level: PAHO's public health emergencies governance and management systems/incident management support teams (IMST) – What organizational arrangements and procedures might need to improve?	Forward-looking perspective

f) QIR – interview protocol – PAHO COVID-19 response

For example, PAHO; WHO; Health Emergencies (PHE); Emergency Operations (EMO).

QUESTION	EVALUATION DIMENSION
1. How do you evaluate the role of the Country Health Emergency Preparedness initiative (CHEP) during the COVID-19 pandemic (their views on the CHEP role and how well/poorly it has performed during pandemic)?	Efficiency
2. What were the CHEP's main strengths?	Effectiveness, efficiency
3. What were the main weaknesses of the CHEP?	Effectiveness, efficiency
4. What are the major challenges for the CHEP?	Effectiveness, efficiency
5. What specific actions should be introduced in the CHEP to adapt it for future challenges/emergencies?	Effectiveness, efficiency
6. How do you rate PAHO's work in risk communication during the pandemic?	Effectiveness
7. How did PAHO face the infodemic?	Effectiveness
8. What measures can ensure better risk communication in the future?	Effectiveness
9. What was the role of the Emergency Medical Teams initiative during the COVID-19 pandemic?	Effectiveness
10. What were the Emergency Medical Teams´ main strengths?	Effectiveness
11. What are the major challenges for the Emergency Medical Teams initiative?	Effectiveness
12. Were new partnerships established during the emergency response? Evaluate the performance of this partnership for the country(ies) and comment on the problem(s) addressed and the scope (regional or national).	Coordination

(Continued)

QUESTION	EVALUATION DIMENSION
13. Should any of these partnerships be maintained/continued beyond the emergency to operate during regular times? Explain why.	Coordination
14. How do you evaluate the capacity of the countries of the Region to manage the cycle of organized and systematic collection, analysis, and interpretation of information from all sources to detect, verify, investigate, communicate, and respond to possible health risks?	Effectiveness, sustainability, lessons and best practices
15. What is the weakest component of this cycle?	
16. What measures could be implemented to overcome the weakness(es)?	Effectiveness, lessons and best practices
17. Other recommendations – In terms of (not exhaustive list): - Partnerships - Technical support to Member States – What could strengthen PAHO's ongoing response and the quality of the related service delivery by the Organization? - Programming – What should be done differently to enhance COVID-19 response programming while addressing longer-term health needs or future emergencies? - Organizational level: PAHO's public health emergencies governance and management systems/incident management support teams (IMST) – What organizational arrangements and procedures might need to improve?	Forward-looking perspective

g) QIPSP – interview protocol – central topic PAHO Strategic Plan

For example, PAHO; WHO.

QUESTION	EVALUATION DIMENSION
1. To what extent did the PAHO Strategic Plan 2020–2025 enable the organization's response to the COVID-19 pandemic?	Effectiveness, efficiency
2. To what extent was the PAHO Strategic Plan affected by the pandemic and the resulting political and economic environment?	Effectiveness, efficiency, organizational level
3. Based on the lessons learned during the pandemic, which components of the PAHO Strategic Plan should be reviewed/revised in the short term, and in the medium and long term?	Effectiveness, efficiency, organizational level
4. To what extent can the financial strategies used to overcome the cancellation of contributions from Member States be maintained/ continued in the long term?	Effectiveness, efficiency, organizational level, central topics
5. What other measures can ensure future financial stability?	Efficiency, organizational level, central topics
6. Any particular comment about Outcomes 23, 24, and 25 of the 2020–2025 Strategic Plan? Do these address issues directly related to the COVID-19 pandemic? (Health emergencies preparedness and risk reduction, epidemic and pandemic prevention and control, health emergencies detection and response) *(interviewer to remind the respondent what these outcomes are)*	Organizational Level

h) QIPRMS – PAHO representatives and Member States (government)

For example, PWR; PAHO country office focal point responsible for COVID-19 coordination at a technical level (including Panama as a logistics hub and Barbados as a subregion).

For example, MoH and high-level representatives; general directors, cabinet, ministers; other ministers/public bodies with direct responsibility for high-level political/institutional COVID-19 responses (e.g., foreign affairs, economy).

QUESTION	EVALUATION DIMENSION
1. To what extent is PAHO's response to COVID-19 aligned with national response plans?	Relevance, coherence
2. How did PAHO determine the needs generated by the pandemic in your country's office?	Relevance, coherence
3. Were the COVID-19 national response plans completed and shared with PAHO? if so, when did that happen?	Relevance, coherence
4. Was a section on needs and priorities included in the COVID-19 national response plan?	Relevance, coherence
5. Did PAHO provide technical support and/or education and training to identify/define needs and priorities in COVID-19 national response plans?	Relevance, coherence
6. To what extent did PAHO emphasize the importance of ensuring equity in Member States' national responses?	Relevance, coherence
7. Please outline any difficulties that PAHO faced during the phases of the emergency response. *(Interviewer to remind respondent of the different phases)*	Relevance, coherence
8. **(Modalities of cooperation)** To what/on which level has PAHO assisted Member States in the following areas of cooperation: a. Institutional and political advocacy b. Technical assistance c. Education and training d. Epidemic intelligence, evidence generation, and dissemination e. South–South and triangular cooperation f. Communication g. Resource mobilization h. Logistics and supply chains	Relevance, coherence, effectiveness, added value

(Continued)

QUESTION	EVALUATION DIMENSION
9. **(10 pillars)** Which of PAHO's areas of cooperation (Pillars of the PAHO strategic response plan) have the potential to strengthen health systems over time and beyond the pandemic? *(interviewer to remind the respondent of the pillars below)* a. Coordination, planning, financing, and monitoring b. Risk communication, community engagement, and infodemic management c. Surveillance, rapid response teams, and case investigation d. Points of entry, international travel, transport, and mass gatherings e. Laboratories and diagnostics f. Infection prevention and control, and protection of the health workforce g. Case management, clinical operations, and therapeutics h. Operational support and logistics, and supply chains i. Strengthening essential health services and systems j. Vaccination (Since 2021)	Relevance, effectiveness, added value, sustainability
10. How well has PAHO coordinated its response (with Member States, other partners – United Nations, donors, NGOs, CSOs) to ensure a timely and cost-effective response and avoid duplication?	Coordination
11. What pandemic preparedness actions and response measures supported by PAHO were shown to be effective (worked well) in previous outbreaks and also during the COVID-19 response?	Sustainability
12. What was the level of uptake by Member States of PAHO's Technical Cooperation in pandemic response?	Sustainability
13. Can you identify the policies or practices in your country that you consider essential in dealing with the COVID-19 pandemic and that you would recommend maintaining/using for future public health emergencies?	Lessons and best practices
14. Can you mention policies or practices of your country that you believe caused serious difficulties in handling the COVID-19 pandemic and that you would recommend being reviewed/revised/not used for future public health emergencies?	Lessons and best practices
15. What have been PAHO's unique contributions during the response to the COVID-19 pandemic? In which areas has PAHO technical support to Member States excelled or made a difference (suggest 2 max.)?	Lessons and best practices
16. Is there anything else you would like to share or recommend about the PAHO COVID-19 response?	Recommendations

Additional section on well-being (only for PWR)

QUESTION	EVALUATION DIMENSION
17. What positive action has the Organization taken to support personnel during the pandemic that can be kept for future crises (so that they can be maintained or reinstated in future crises)?	Efficiency
18. What were the best measures implemented by the Organization to support the health and well-being of personnel?	Efficiency
19. What can the Organization do better for its personnel, noting that the focus of this initiative is on improvement? List up to three suggestions to improve the health and well-being of personnel.	Efficiency

4.2. Categories of respondents for KIIs and surveys

Instruments

One questionnaire to be administered across four different categories of respondents for KIIs:

1. PAHO staff at all levels + some categories of contingent workers;
2. PAHO country office focal point responsible for COVID-19 coordination at a technical level (including Panama as a logistics hub and Barbados as a subregion);
3. PAHO country representatives (PWRs);
4. MoH technical level – person responsible for COVID-19 coordination with PAHO.

The survey will address PAHO performance and well-being, but only PAHO staff will answer questions about well-being.

Nine semi-structured interview guides were generated with 10 common questions:

1. Introductory questions for every headquarters chief of unit and some KII;
2. QIP interview protocol – partners
3. QIHQ – interview protocol – PAHO headquarters
4. QIV – interview protocol – central topic Vaccines (COVAX)
5. QIE – interview protocol – central topic Evidence-Based Portal (Evidence and Intelligence for Action in Health)
6. QIIM – interview protocol– central topic Incident Management Support Teams (IMST)
7. QIR – interview protocol– PAHO COVID-19 response
8. QIPSP – interview protocol – central topic PAHO Strategic Plan
9. QIPR – PAHO representatives
10. QIPR – PAHO representatives and Member States (government)

Annex Table 20. Categories of respondents for KIIs and surveys

#	KIIS CATEGORIES/ SUBCATEGORIES	DATA COLLECTION TOOL TO BE APPLIED	EXISTING TOOLS	NUMBER OF COUNTRIES/ LEVELS TO BE APPLIED	TOTAL SAMPLE OF KIIS (APPROX.)	SAMPLE FOR PRE-TESTING	COMMENTS
1	**Member States (government)**						
1.1	MoH political/ institutional high-level decisionmakers (e.g., general directors, cabinet, minister)	Semi-structured interview (remote)	• Introductory questions for every headquarters chief of unit and some KIIs • QIPRMS – PAHO representatives and Member States (government)	6 (in-depth case study countries) 2–3 KIIs per country	12–18	1	
1.2	MoH technical level – person responsible for COVID-19 coordination with PAHO	Telephone survey (Kobo)	• PAHO performance survey	35	35	1	
1.3	Other ministers/ public bodies with direct responsibility for high-level political/ institutional in COVID-19 responses at political/ institutional high level (e.g., foreign affairs, economy)	Semi-structured interview (remote)	• QIPRMS – PAHO representatives and Member States (government)	6 (in-depth case study countries)	6	–	

(Continued)

#	KIIS CATEGORIES/ SUBCATEGORIES	DATA COLLECTION TOOL TO BE APPLIED	EXISTING TOOLS	NUMBER OF COUNTRIES/ LEVELS TO BE APPLIED	TOTAL SAMPLE OF KIIS (APPROX.)	SAMPLE FOR PRE-TESTING	COMMENTS
2	**PAHO (all levels)**						
2.1	PAHO headquarters – executives and senior management teams and senior management at subregions (DD, AD, AM, FRM, HRM, PRO, CMU, ERP, PBE, PHE, CSC, FPL, CDE, EIH, NMH, HSS, RRF, EGC)	Semi-structured interview (remote/ face-to-face)	• Introductory questions for every headquarters chief of unit and some KIIs • QIHQ – interview protocol – PAHO headquarters • QIV – central topic Vaccines COVAX • QIE – central topic Evidence-Based Portal • QIM – central topic IMST • QIR – central topic PAHO Response • QIPSP – central topic PAHO Strategic Plan	19 (headquarters units) 4 (subregions)	23	–	
2.2	PAHO country representatives (PWRs)	Semi-structured interview (remote) Telephone survey (KoBo)	• Introductory questions for every headquarters chief of unit and some KIIs • QIPRMS – PAHO representatives and Member States (government) • PAHO staff well-being and performance survey	Semi-structured interviews in 6 in-depth case study countries; survey to the rest of PAHO country representatives	6 29	1 –	

(Continued)

#	KIIS CATEGORIES/ SUBCATEGORIES	DATA COLLECTION TOOL TO BE APPLIED	EXISTING TOOLS	NUMBER OF COUNTRIES/ LEVELS TO BE APPLIED	TOTAL SAMPLE OF KIIS (APPROX.)	SAMPLE FOR PRE-TESTING	COMMENTS
2.3	PAHO country office focal point responsible for COVID-19 coordination at a technical level (including Panama as a logistics hub and Barbados as a subregion)	Telephone survey (Kobo)	• PAHO well-being and performance survey	35+1+1	37	1	
2.4	PAHO staff at all levels and some categories of contingent workers	Online survey (Gallup)	• PAHO well-being and performance survey	35 + subregional offices + headquarters	~2300	2	
2.5	PAHO contingent workers	Semi-structured interview (remote)	• QIPRMS – PAHO representatives and Member States (government)	Within 6 case study countries 1–2 respondents for each country	6–12	1	
3	**United Nations, international financial organizations, other international organizations**						
3.1	United Nations agencies (selected) at headquarters/ regional e.g., UN Humanitarian Response Depot Panama; UN Development Coordination Office Panama; WFP; UNICEF; UNDP; UNHCR; OCHA; WHO Geneva; Gavi; FIND; IADB, CABEI; WD	Semi-structured interview (remote)	• QIP central topic Partners • QIV central topic Vaccines (COVAX)		13		

(Continued)

#	KIIS CATEGORIES/ SUBCATEGORIES	DATA COLLECTION TOOL TO BE APPLIED	EXISTING TOOLS	NUMBER OF COUNTRIES/ LEVELS TO BE APPLIED	TOTAL SAMPLE OF KIIS (APPROX.)	SAMPLE FOR PRE-TESTING	COMMENTS
3.2	United Nations agencies (selected) at country level e.g., UN Resident Coordinator Office; WFP; UNICEF; UNDP; UNHCR	Semi-structured interview (remote)	• QIP central topic Partners. • QIV central topic Vaccines (COVAX)	6 case studies 1–2 KIIs for each country	6–12	1	The interview protocol will be tailored according to the role of the respondent and geographic level (national, regional, or international level)
4	**Donors (cash & in-kind)**						
4.1	Bilateral donors e.g., USAID; Global Affairs Canada (GAC)	Semi-structured interview (remote/ face-to-face)	• QIP central topic Partners	TBD	2		The interview protocol will be tailored according to the role of the respondent and geographic level (national, regional, or international level)
4.2	Private donors e.g., Fundación MAPFRE, Mary Kay, SONY	Semi-structured interview (remote)	• QIP central topic Partners	TBD	3		The interview protocol will be tailored according to the role of respondent and geographic level (national, regional, or international level)

(Continued)

#	KIIS CATEGORIES/ SUBCATEGORIES	DATA COLLECTION TOOL TO BE APPLIED	EXISTING TOOLS	NUMBER OF COUNTRIES/ LEVELS TO BE APPLIED	TOTAL SAMPLE OF KIIS (APPROX.)	SAMPLE FOR PRE-TESTING	COMMENTS
5	**National counterparts (country level)**						
	Academic and research institutions; nongovernmental organizations (national); private sector; media; others	Semi-structured interview (remote)	• QIP central topic Partners	6 in-depth case study countries 1–2 KIIs for each country	6–12	1	Identify local/ regional partners at country levels The interview protocol will be tailored according to the role of the respondent and geographic level (national, regional, or international level)
6	**Other regional partners**						
	e.g., CDC; NIH; Rockefeller Foundation; Facebook; TikTok; others	Semi-structured interview (remote)	• QIP central topic Partners	5–10	5–10	1	Identify local/ regional partners at country levels The interview protocol will be tailored according to the role of the respondent and geographic level (national, regional, or international level)

At the national/country level the KIIs will be:

- Institutional/political level, involved in decisionmaking about national strategy, plans, and the allocation of budget to respond to COVID-19. Ideally involved in the COVID-19 response for as long as possible but a minimum of three months in the position. Potentially including the ministerial level.
- Technical teams: National focal points for COVID-19 response/members of COVID-19 operations centers/ experience in one or more areas (epidemiological intelligence and data management, lab and testing, clinical management, risk communication, infection prevention and control, maintaining essential services, points of entry, procurement, and logistics). Ideally involved in the COVID-19 response for as long as possible but a minimum of three months in the position.
- COVID-19 vaccination rollout teams: The focal person for coordination with COVAX partners (PAHO, UNICEF). Ideally involved in the COVID-19 response for as long as possible but a minimum of three months in the position.
- Coordination units: National focal points for interagency (United Nations) coordination and international cooperation coordination. Ideally involved in the COVID-19 response for as long as possible but a minimum of three months in the position.
- Other partners at the country level (NGOs/INGOs, universities, private sector, media).
- Involved in joint actions with PAHO (e.g., programming, training, research, direct implementation) at any phase of the pandemic, through any kind of agreement.
- Supported the work of PAHO in the country (e.g., funding, in-kind donations, communication, logistics).
- United Nations agencies that PAHO collaborated with at the country level.

4.3. Survey questionnaire

Survey introduction

Public Survey Name: Survey for the external Evaluation of PAHO's Response to COVID-19
Dear colleagues,
An evaluation of PAHO's response to COVID-19 is being designed, developed, and conducted by an external team of independent evaluators.
As part of the evaluation, the external team of evaluators would like to invite you to participate in this survey. Only the external team will have access to the survey results.
Your contribution will be of great importance to improving the organization's work and actions in future crises. Please read the information carefully in this link before agreeing to participate in this survey.
If you have any questions about the evaluation or this survey, please contact the Evaluation Team at the email address: surveyeprc@gmail.com
The survey takes 15–20 minutes to complete. Please complete the survey in one sitting while connected to the Internet, as answers will not be saved unless the entire survey has been submitted.
Thank you!

Message to be sent as e-mail

Subject Line: External PAHO COVID-19 Response (EPRC) Survey

Dear colleagues,

As announced through a PIB-HQ-CO-Centers-22-0148, the External and independent Evaluators in charge of the Evaluation of PAHO´s Response to COVID-19 (EPRC), would like to invite you to participate in the survey to examine PAHO's performance in the ongoing response to COVID-19 and ascertain PAHO staff's perceptions about their well-being during this health crisis.

The survey is voluntary and confidential and takes only 15–20 minutes to be completed. Your opinion is extremely important to us, so we appreciate your kind and active participation.

START THE SURVEY BUTTON (*this was linked to the online questionnaire presented in Annex Table 21*)

If you have any questions about the evaluation or this survey, please contact the Evaluation Team at the email address: surveyeprc@gmail.com

Thank you!

Reminder

Subject Line: Gentle reminder to complete external PAHO COVID-19 Response (EPRC) Survey

Annex Table 21. Survey questionnaire per dimension

# IDENTIFICATION	DIMENSION	QUESTIONS	OPTIONS
1		Country office	List of country offices
2		Department	List of departments
3		What type of contract do you have?	a) Fixed-term
			b) Short-term
			c) Contingent worker
			d) Other: _____(please specify)
4		At which level of the organization do you work?	a) Headquarters (Washington, D.C.)
			b) PAHO country offices or Eastern Caribbean Countries (ECC)
			c) Pan American Centers
			d) Other: _____(please specify)
5		You are a:	a) Professional
			b) National Officer
			c) General Services
			d) Other: _____(please specify)

(Continued)

# DIMENSION IDENTIFICATION	QUESTIONS	OPTIONS
6	How long have you been working at PAHO?	a) Less than one year (Close survey)
		b) 1–2 years
		c) 3–5 years
		d) 6–10 years
		e) 11–15 years
		f) 16–20 years
		g) 21–25 years
		h) 26–30 years
		i) 31–35 years
		j) Over 35 years
7	What role do you have in the organization?	a) Individual contributor
		b) Supervisor
		c) Department director/PWR/center director
		d) Organization's Executive Management (EXM)
		e) Administrative support
8	You identify yourself as:	a) Male
		b) Female
		c) Other/nonbinary
9	What is your age group?	a) 20–29 years old
		b) 30–39 years old
		c) 40–49 years old
		d) 50–59 years old
		e) 60–62 years old
		f) over 63 years old

(Continued)

# DIMENSION IDENTIFICATION	QUESTIONS	OPTIONS
10	Did you work at PAHO during 2020 and/or 2021?	a) Yes, I worked during 2020 and 2021
		b) Yes, only during 2021
		c) No, I didn't work during 2020 and 2021 (Close survey) Thank you for your collaboration. This survey is only for those working at PAHO in 2020 and/or 2021. Please press next to submit and end the survey. Thank you!
PAHO's performance in the COVID-19 pandemic response This section aims to gather information about the overall PAHO performance in the ongoing response to COVID-19 and its support to the national responses of Member States.		
1	In your view, to what extent has PAHO's response to COVID-19 achieved its intended results?	a) Achieved very well
		b) Achieved well
		c) Achieved fairly well
		d) Achieved poorly
		e) Achieved very poorly
		f) I don't know how to answer
2	How was PAHO's performance in the emergency response at the start of COVID-19 (at the time when there was initial uncertainty – March 2020 – August 2020)?	a) Performed very well
		b) Performed well
		c) Performed fairly well
		d) Performed poorly
		e) Performed very poorly
		f) I don't know how to answer
3	How was PAHO's performance in the emergency response during the various waves of COVID-19 (waves refer to the successive increase and decrease of the number of cases over time)?	a) Performed very well
		b) Performed well
		c) Performed fairly well
		d) Performed poorly
		e) Performed very poorly
		f) I don't know how to answer
4	How was PAHO's performance in the emergency response during the vaccination phase of COVID-19?	a) Performed very well
		b) Performed well
		c) Performed fairly well
		d) Performed poorly
		e) Performed very poorly
		f) I don't know how to answer

(Continued)

# IDENTIFICATION	DIMENSION	QUESTIONS	OPTIONS
5		Please outline any difficulties that PAHO faced during the phases of the emergency response outlined above.	Open question for the PWR and Member States (focal points)
6	Relevance, coherence – Q2	In your opinion, to what extent is PAHO's emergency response to COVID-19 aligned with national response plans?	a) Highly aligned
			b) Aligned to some extent
			c) Not at all aligned
			d) I don't know how to answer
7	Relevance, coherence – Q1	Did PAHO support the Member States in defining needs and priorities generated by the COVID-19 pandemic?	a) Yes, during the first month of the pandemic
			b) Yes, during the first six months of the pandemic (March 2020 – August 2020)
			c) Yes, during the first year of the pandemic (March 2020 – March 2021)
			d) Yes, during the whole pandemic (March 2020 – today)
			e) No, PAHO didn't support the Member States in defining needs and priorities
			f) I don't know how to answer
8	Relevance, coherence – Q1	Were the COVID-19 national response plans completed and shared with PAHO?	a) Yes, during the first month of the pandemic
			b) Yes, during the first six months of the pandemic (March 2020 – August 2020)
			c) Yes, during the first year of the pandemic (March 2020 – March 2021)
			d) Yes, during the whole pandemic (March 2020 – today)
			e) No, the plans were not completed and shared with PAHO
			f) I don't know how to answer
9	Relevance, coherence – Q1	In the national COVID-19 response plans, was there a section on needs and priorities?	a) Yes
			b) No
			c) I don't know how to answer
10	Relevance, coherence – Q1	Did PAHO provide technical support to help define needs and priorities in the COVID-19 national response plans?	a) Yes
			b) No
			c) I don't know how to answer

(Continued)

# IDENTIFICATION	DIMENSION	QUESTIONS	OPTIONS
11	Relevance, coherence – Q1	Did you receive material and/or technical support from PAHO that was not included in the COVID-19 national response plans?	a) Yes b) No c) I don't know how to answer
11.1	Relevance, coherence – Q1	If yes, was the material and/or technical support received from PAHO helpful in implementing the COVID-19 national response plans?	a) Yes b) No c) I don't know how to answer
12	Relevance, coherence – Q1	Did you receive education and training from PAHO to implement the national COVID-19 response plans?	a) Yes b) No c) I don't know how to answer
13	Relevance, coherence – Q3	In your opinion, to what extent did PAHO advocate for addressing health equity in the COVID-19 national response plans? (Health equity is achieved when everyone can attain their full potential for health and well-being) Open question KoBo – Please provide two examples of how PAHO promoted health equity	a) Very frequently b) Frequently c) Occasionally d) Never e) I don't know how to answer Open question for the PWR and Member States (focal points)
14	Relevance, coherence – Q3	In your opinion, to what extent was advocacy successful in attaining health equity (during the COVID-19 national response)?	a) Fully successful b) Partially successful c) Unsuccessful d) I don't know how to answer
15	Sustainability – Q2	How well have the Member States adopted PAHO's recommendations (via technical support) about COVID-19 response?	a) Very well-adopted b) Well-adopted c) Fairly well-adopted d) Poorly adopted e) Very poorly adopted f) I don't know how to answer
16	Sustainability – Q1	Please, provide evidence of what pandemic preparedness actions and response measures supported by PAHO were shown to be effective in previous outbreaks and also during the COVID-19 response?	Open question for the PWR and Member States (focal points)

(Continued)

# IDENTIFICATION	DIMENSION	QUESTIONS	OPTIONS
17	Coordination – Q2	How well has PAHO coordinated its response to ensure a timely and cost-effective response and avoid duplication (with Member States, other partners – UN, donors, NGOs, CSOs)? Open question KoBo – Please, provide evidence of how well has PAHO coordinated its response? (to ensure a timely and cost-effective response and avoid duplication) (with Member States, other partners – UN, donors, NGOs, CSOs)	a) Very well-coordinated
			b) Well-coordinated
			c) Fairly well-coordinated
			d) Poorly coordinated
			e) Very poorly coordinated
			f) I don't know how to answer
			Open question for the PWR and Member States (focal points)
18	Relevance (including coherence), effectiveness, added value	On a scale of 1 to 5, with 1 being "Very Low Level of Assistance" and 5 being "Very High Level of Assistance" to the country, please rate the level of PAHO assistance during the COVID-19 pandemic in the following areas of cooperation:	a) Institutional and political advocacy
			b) Technical assistance
			c) Education and training
			d) Epidemic intelligence and evidence generation
			e) South–South and triangular cooperation
			f) Risk communication
			g) Resource mobilization
			h) Logistics and supply chains
			i) Does not apply or I don't know how to answer

(Continued)

#	DIMENSION	QUESTIONS	OPTIONS
IDENTIFICATION			
19	Relevance, effectiveness added value, sustainability	On a scale of 1 to 5, with 1 being "Very Low Potential" and 5 "Very High Potential," which PAHO cooperation areas have the potential to strengthen health systems over time and beyond the COVID-19 pandemic?	a) Coordination, planning, financing, and monitoring
			b) Risk communication, community engagement, infodemic management
			c) Surveillance, rapid response teams, and case investigation
			d) Points of entry, international travel and transport, mass gatherings
			e) Laboratories and diagnostics
			f) Infection prevention and control, and protection of the health workforce
			g) Case management, clinical operations, and therapeutics
			h) Operation support and logistics, and supply chains
			i) Strengthening essential health services and systems
			j) Vaccination
			k) Does not apply or I don't know how to answer
20	Relevance (including coherence), effectiveness, added value	On a scale of 1 to 5, with 1 being "Very Low Level of Assistance" and 5 being "Very High Level of Assistance," please indicate the level of PAHO assistance during the COVID-19 pandemic to help achieve the following three goals:	a) Equitable health systems
			b) Resilient health systems
			c) Sustainable health systems
			d) Does not apply or I don't know how to answer
21	Lessons and best practices – Q1,2	Can you mention policies or practices of your country office that you consider essential to effectively handling the COVID-19 pandemic and that you would recommend maintaining for future public health emergencies?	Open question for the PWR and Member States (focal points)
22	Lessons and best practices – Q1,2	Can you mention policies or practices of your country office that you believe caused severe difficulties in handling the COVID-19 pandemic and that you would recommend reviewing/not using in future public health emergencies?	Open question for the PWR and Member States (focal points)

(Continued)

#	DIMENSION	QUESTIONS	OPTIONS
IDENTIFICATION			
23	Added value – Q1	What have been PAHO's unique contributions during the response to the COVID-19 pandemic?	Open question for the PWR and Member States (focal points)
24	Added value – Q1	In which areas has PAHO technical support to the Members States excelled or made a difference (suggest two max)?	Open question for the PWR and Member States (focal points)
25	-	Is there anything else you would like to share or recommend about the PAHO COVID-19 response?	Last question and open question for the PWR and Member States (focal points)
Health & well-being of PAHO personnel This section aims to gather information about the overall well-being of PAHO staff as a factor of PAHO's performance and response. This will help to understand the effects of the pandemic more holistically. To achieve this, the following assessment will document PAHO's (a) role, (b) responsibilities, and (c) actions in regional, subregional, and country offices during the implementation and delivery of the COVID-19 pandemic response.			
1	Efficiency – Q4	Did your work/life balance change during the pandemic compared to before?	a) Yes
			b) No
			c) I don't know how to answer
1.1	Efficiency – Q4	If yes, how did your work/life balance change during the pandemic compared to before the pandemic?	a) The pandemic improved my work/life balance
			b) The pandemic affected my work/life balance negatively
			c) I don't know how to answer
2	Efficiency – Q4	Did your stress level increase during the pandemic?	a) Yes
			b) No
			c) I don't know/I don't want to answer
2.2	Efficiency – Q4	If yes, what were the main reasons for this increase in your stress level? (tick all that apply)	a) Increased workload
			b) Financial crisis
			c) Health concerns
			d) Difficult to balance professional and personal life
			e) Fear of COVID-19
			f) Inadequate management support
			g) Tight deadlines for deliveries/tasks at work
			h) Reduced resources

(Continued)

#	DIMENSION IDENTIFICATION	QUESTIONS	OPTIONS
			i) Lack of control over decisions
			j) Inadequate support from colleagues
			k) Caring for ill family members
			l) Childcare issues
			m) Lack of family support
			n) Other: _____(please specify)
3	Efficiency – Q4	When was the most challenging time for your well-being during the pandemic?	a) During the first month of the pandemic
			b) During the first six months of the pandemic (March 2020 – August 2020)
			c) During the first year of the pandemic (March 2020 – March 2021)
			d) Throughout the whole pandemic period (March 2020 – today)
			e) I didn't have any challenging time
4	Efficiency – Q4	In your opinion, to what extent has PAHO's duty of care contributed to protecting your health and well-being?	a) Contributed a lot
			b) Contributed mildly
			c) Contributed very mildly
			d) Did not contribute at all
			e) I don't know how to answer
5	Efficiency – Q4	Did PAHO provide resources to support your **health and well-being** during the pandemic?	a) Yes, during the first month of the pandemic
			b) Yes, during the first six months of the pandemic (March 2020 – August 2020)
			c) Yes, during the first year of the pandemic (March 2020 – March 2021)
			d) Yes, throughout the whole pandemic period (March 2020 – today)
			e) No, I didn't have support
			f) I don't know/I am not sure

(Continued)

# IDENTIFICATION	DIMENSION	QUESTIONS	OPTIONS
5.1	Efficiency – Q4	If yes, which of the following features/ facilities did PAHO provide to support your health and well-being? (check all that apply)	a) Telework
			b) Flexible working hours
			c) Access to COVID-19 diagnostics, health care in case of symptoms, and to vaccines
			d) Provided free time activities to socialize
			e) Support to reconcile life and work
			f) Access to counseling services and mental health professionals for free
			g) Other: _____(please specify)
6	Efficiency – Q4	Did PAHO provide any of the following resources to support **your work** during the pandemic? (check all that apply)	a) Home-office resources to facilitate work, such as ergonomic chairs
			b) Ergonomic guidance
			c) Home-office supplies such as Internet access, computer, screens, keyboard, and mouse
			d) Telephone
			e) Information technology (IT) guidance and support
			f) None
			g) Other: _____(please specify)
			h) I don't know
7	Efficiency – Q4	Did you work remotely during the pandemic?	a) Yes
			b) No
7.1	Efficiency – Q4	What kind of work modality did you have during 2020 and 2021? [Mark one or two options]	a) Fully remote (2020, 2021, and 2022)
			b) Fully remote (only in 2020)
			c) Fully remote (in 2021 and/or 2022)
			d) Hybrid model (2020 and 2021)
			e) Hybrid model (only 2020)
			f) Hybrid model (in 2021 and/or 2022)
			g) In-office (2020, 2021, and 2022)
			h) In-office (only in 2020)
			i) In-office (in 2021 and/or 2022)
7.2	Efficiency – Q4	If you did telework/remote work during the pandemic, did it contribute to your well-being?	a) Yes
			b) No
			c) I don't know/I am not sure

(Continued)

# IDENTIFICATION	DIMENSION	QUESTIONS	OPTIONS
7.3	Efficiency – Q4	In your opinion, did teleworking/ remote working contribute to your work performance?	a) Yes
			b) No
			c) I don't know/I am not sure
8	Efficiency – Q4	Has your physical activity changed compared to before the pandemic?	a) Yes, my physical activity improved
			b) Yes, my physical activity got worse
			c) No, my physical activity did not change
			d) I don't know /I don't want to answer
9	Efficiency – Q4	What did you do to take care of your mental health and well-being at work since the start of COVID-19 pandemic? (tick all that apply)	a) Improve my time management
			b) Take more breaks during work
			c) Set boundaries between personal and professional life
			d) Engage in learning
			e) Seek support from counseling services in my organization
			f) Other: _____(please specify)
10	Efficiency – Q4	What did you do outside work (at home) to take care of your health and well-being since the start of COVID-19? (Check all that apply)	a) Keep my everyday life
			b) Connect in person with family I live with
			c) Connect in person with family I do not live with
			d) Connect in person with friends I live with
			e) Connect in person with friends I do not live with
			f) Connect with family and friends remotely
			g) Connect with friends remotely
			h) Eat healthy
			i) Work out
			j) Get out into nature
			k) Engage in spiritual practices
			l) Get the right amount of sleep
			m) Journaling
			n) Practice hobbies
			o) Connect with a pet

(Continued)

# IDENTIFICATION	DIMENSION	QUESTIONS	OPTIONS
			p) Seek professional help
			q) Take medication
			r) Other: _____(please specify)
11	Efficiency – Q4	Have you been diagnosed with COVID-19?	a) Yes, once
			b) Yes, multiple times
			c) No
			d) I don't know
			e) I don't want to answer
11.1	Efficiency – Q4	If yes, were you hospitalized?	a) Yes
			b) No
			c) I don't want to answer
12	Efficiency – Q4	Have you lost any relatives or friends due to COVID-19? (Check all that apply)	a) To nobody
			b) Yes, a first-degree relative (spouse – children – parents)
			c) Yes, a second-degree relative (brothers/sisters – half-brothers/half-sisters – grandchildren – grandparents)
			d) Yes, friends or colleagues
			e) I don't want to answer

Annex 5.
Extended information from findings section

5.1. Relevance and coherence

Alignment between national response plans

At the onset of the pandemic, when PAHO country offices began supporting national emergency responses and adopted varying approaches, the dissemination of PAHO's Response Strategy and Donor Appeal provided a common emergency response framework for the Region. The WHO/PAHO preparedness and response plan also served as a reference for incorporating the health pillar in the broader United Nations Socio-Economic Response Plans developed by the 25 United Nations country teams in the Region in 2020. This was following the United Nations framework for the immediate socioeconomic response to COVID-19 launched in April 2020 to guide the "whole-of-UN" support to Member States.[10]

Annex Table 22 shows the alignment between national response plans from six countries[11] and PAHO's Response Strategy and Donor Appeal, using WHO/PAHO pillars as a framework. In general, the reviewed national response plans included functions related to early pandemic response, coordination, national laboratories, infection prevention and control (IPC) and protection of the health workforce, case management, and (added later) vaccination. To a large extent, Member States' COVID-19 national response plans and WHO/PAHO pillars are aligned and related to health priorities, including health services to vulnerable populations, attention to noncommunicable diseases (NCDs), and essential health services *(100)*.

From an organizational perspective, 51%[12] of PAHO personnel considered that PAHO's emergency response to COVID-19 was highly aligned with Member States' national response plans, whereas 37%[13] considered that it was aligned to some extent. Only 2%[14] reported that there was no alignment between PAHO's COVID-19 response plan and the national response plans (Annex Figure 16).

---

10 WHO published the first Novel Coronavirus (2019-nCoV) Strategic Preparedness and Response Plan on 3 February 2020. It served as a global reference document to guide both State responses and the support provided by the United Nations system in general and PAHO/WHO in particular. WHO's COVID-19 Strategic Preparedness and Response Plan was updated and complemented by WHO's Strategy Update (dated 14 April) and WHO's Operational Planning Guidelines (22 May 2020). These documents framed the development and dissemination of PAHO's donor appeals in March 2020 (versions 1 and 2), including PAHO's priority lines of action and Response Strategy and Donor Appeal in August 2020, and the nine pillars.

11 Selected by the EPRC as an in-depth country analysis.

12 430 respondents.

13 321 respondents.

14 19 respondents.

Annex Table 22. Alignment between national response plans (selected countries) and WHO/PAHO Response Strategy and Donor Appeal (based on pillars)

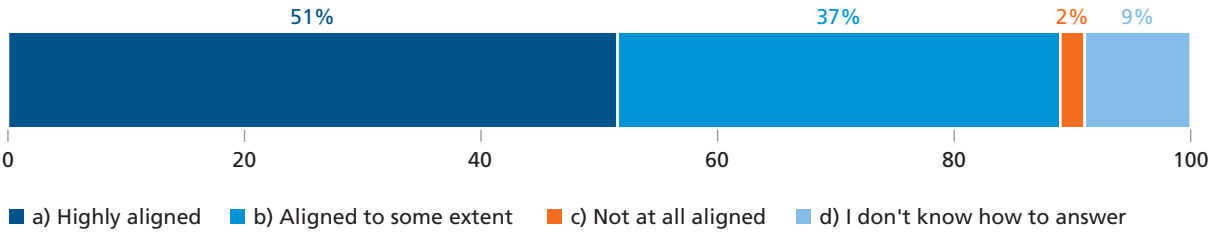
PAHO COVID-19 RESPONSE PILLARS	BARBADOS	BRAZIL	GUATEMALA	HAITI	MEXICO	PERU
P1: Country-level coordination, planning and monitoring	●	●	●	●	●	●
P2: Risk communication and community engagement	●	●	●	●	●	●
P3: Surveillance, rapid response teams and case investigation	●	●	●	●	●	●
P4: Points of entry, international travel and transport	●	●	●	●	●	●
P5: National laboratories	●	●	●	●	●	●
P6: Infection prevention and control, and protection of the health workforce	●	●	●	●	●	●
P7: Case management, clinical operations, and therapeutics	●	●	●	●	●	●
P8: Operational support and logistics, and supply chain	●	●	●	●	●	●
P9: Maintaining essential health services during the pandemic	●	●	●	●	●	●
P10: Vaccination	●	●	●	●	●	●

● Alignment ● No alignment ● Data not available

Source: Developed by the Evaluation Team for the EPRC based on the national response plans of the six in-depth countries studies and WHO/PAHO response strategy (pillars).

Annex Figure 16. Perceptions of PAHO personnel regarding the alignment of PAHO's response to COVID-19 with the national response plans

In your opinion, to what extent is PAHO's emergency response to COVID-19 aligned with national response plans?



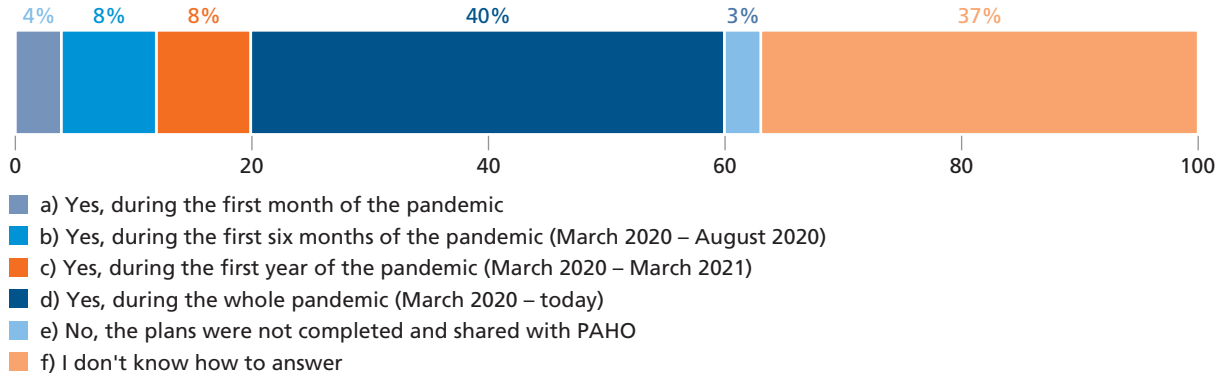
Source: EPRC Gallup and Kobo survey of PAHO personnel, 2022.

In addition, 40% of PAHO personnel[15] reported that COVID-19 national response plans were completed and shared with PAHO (Annex Figure 17).

15 341 respondents.

Annex Figure 17. Perceptions of PAHO personnel regarding the completion and sharing of the COVID-19 national response plans with PAHO COVID-19 response plan

Were the COVID-19 national response plans completed and shared with PAHO?



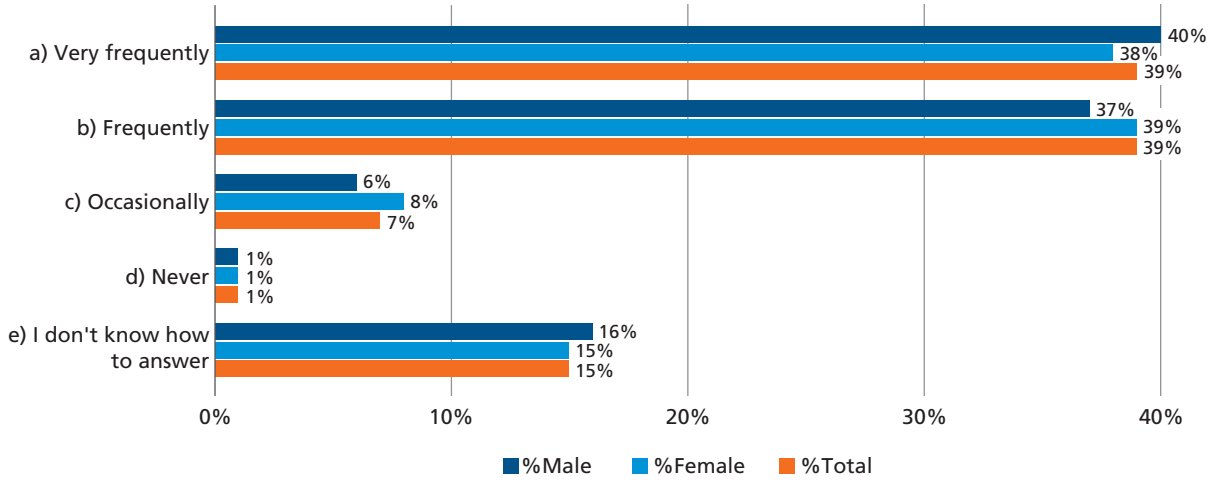
Source: EPRC Gallup and Kobo survey of PAHO personnel, 2022.

PAHO's health equity advocacy assessment

The results of the questionnaire for PAHO's health equity advocacy assessment are presented in Annex Figure 18 and Annex Figure 19.

Annex Figure 18. Perceptions of PAHO personnel regarding PAHO advocating to address health equity in COVID-19 national response

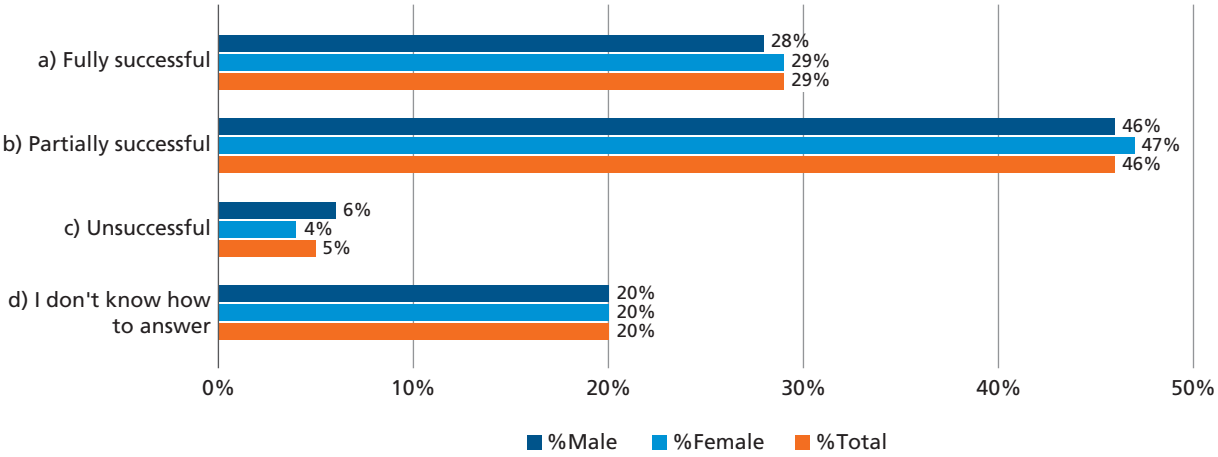
In your opinion, to what extent did PAHO advocate for addressing health equity in the COVID-19 national response?



Source: EPRC Gallup survey of PAHO personnel, 2022.

Annex Figure 19. Perceptions of PAHO personnel regarding to what extent was advocacy successful in attaining health equity (during the COVID-19 national response)?

In your opinion, to what extent was advocacy successful in attaining health equity (during the COVID-19 national response)?



Source: EPRC Gallup and Kobo survey of PAHO personnel, 2022.

COVAX mechanism

As of 30 October 2022, COVAX had provided 155 million vaccines to the Region, which represents 6% of all vaccines delivered in the Americas, or 10% of all vaccines across LAC (155 million were provided by COVAX out of the 1.6 billion vaccines purchased overall in LAC countries). Twenty-three countries and territories in the Region have participated in COVAX, 13 of which are self-financing countries. The remaining 10 participating countries and territories were eligible to receive COVAX vaccines for free to vaccinate 20% of their population through the advance market commitment (AMC) modality; these are the Plurinational State of Bolivia, Dominica, El Salvador, Grenada, Haiti, Honduras, Nicaragua, Saint Lucia, Saint Vincent and the Grenadines, and Martinique *(101)*.

The impact of COVAX on vaccine supply in the Region was heterogeneous (Annex Table 23). In some countries – such as Grenada, Haiti, and Saint Lucia – COVAX vaccines represented over 50% of all vaccines delivered, while it represented less than 5% of the vaccines delivered in other countries such as Brazil, the Dominican Republic, and Uruguay. Most of the vaccines in the Region were acquired through bilateral or multilateral negotiations by Member States with the vaccine companies. Dates of the vaccine shipments, as well as number of doses provided per case study country, are presented in Annex Figure 20. In addition to the case study countries, other countries with different COVAX support are also included to illustrate the diversity across the Region.

Annex Table 23. Vaccine delivered by country and type of acquisition

COUNTRY/ TERRITORY	TOTAL DOSES DELIVERED	BILATERAL/ MULTILATERAL AGREEMENTS		DONATIONS		COVAX		UNKNOWN	
	N	N	%	N	%	N	%	N	%
Anguilla	26 881	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	26 881	100
Antigua and Barbuda	254 790	n.d.	n.d.	156 390	61	60 000	24	n.d.	n.d.

COUNTRY/ TERRITORY	TOTAL DOSES DELIVERED	BILATERAL/ MULTILATERAL AGREEMENTS		DONATIONS		COVAX		UNKNOWN	
	N	N	%	N	%	N	%	N	%
Argentina	150 729 396	139 763 396	93	3 900 000	3	7 066 000	5	n.d.	n.d.
Aruba	191 110	n.d.	n.d.	12 285	6	n.d.	n.d.	178 825	94
Bahamas	569 268	n.d.	n.d.	318 350	56	182 130	32	30 388	5
Barbados	**517 240**	**30 000**	**6**	**372 400**	**72**	**114 840**	**22**	**n.d.**	**n.d.**
Belize	951 050	n.d.	n.d.	630 950	66	171 300	18	n.d.	n.d.
Bermuda	145 247	n.d.	n.d.	n.d.	n.d.	9600	7	135 647	93
Bolivia (Plurinational State of)	24 438 160	11 138 900	46	4 650 000	19	8 649 260	35	n.d.	n.d.
Brazil	**606 577 360**	**587 479 160**	**97**	**5 216 600**	**1**	**13 881 600**	**2**	**n.d.**	**n.d.**
British Virgin Islands	45 600	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	45 600	100
Canada	111 059 108	103 516 198	93	1 000 000	1	972 000	1	5 570 910	5
Cayman Islands	164 069	n.d.	n.d.	59 600	36	n.d.	n.d.	104 469	64
Chile	66 763 474	64 455 674	97	n.d.	n.d.	2 307 800	4	n.d.	n.d.
Colombia	140 326 835	102 178 955	73	8 016 000	6	30 131 880	22	n.d.	n.d.
Costa Rica	15 037 247	10 009 865	67	2 139 130	14	2 559 930	17	328 322	2
Cuba	46 551 765	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	46 551 765	100
Dominica	241 160	n.d.	n.d.	122 200	51	118 960	49	n.d.	n.d.
Dominican Republic	17 693 221	14 718 050	83	80 000	1	463 200	3	2 431 971	14
Ecuador	56 450 516	41 198 796	73	9 168 470	16	6 083 250	11	n.d.	n.d.
El Salvador	13 499 868	8 528 950	63	850 800	6	4 089 250	30	30 868	0
Grenada	228 702	n.d.	n.d.	91 100	40	129 510	57	8092	4
Guatemala	**21 796 167**	**5 068 400**	**23**	**10 364 000**	**48**	**6 238 900**	**29**	**124 867**	**1**
Guyana	1 280 147	410 537	32	427 650	33	410 760	32	n.d.	n.d.
Haiti	**1 124 700**	**n.d.**	**n.d.**	**n.d.**	**n.d.**	**1 124 700**	**100**	**n.d.**	**n.d.**
Honduras	18 132 265	6 133 480	34	588 100	3	8 005 110	44	3 405 575	19
Jamaica	3 786 630	100 000	3	1 617 760	43	1 852 870	49	n.d.	n.d.
Mexico	**260 615 525**	**214 184 585**	**82**	**16 986 900**	**7**	**29 444 040**	**11**	**n.d.**	**n.d.**
Montserrat	5 021	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	5021	100
Nicaragua	14 086 007	1 200 000	9	1 650 000	12	6 465 470	46	4 770 537	34
Panama	9 691 243	7 507 728	78	503 100	5	484 320	5	1 196 095	12
Paraguay	10 651 280	2 643 570	25	3 382 000	32	2 437 170	23	2 188 540	21
Peru	**93 423 774**	**50 325 173**	**54**	**3 035 100**	**3**	**8 261 670**	**9**	**31 801 831**	**34**
Saint Kitts and Nevis	70 648	n.d.	n.d.	43 000	61	21 600	31	6048	9
Saint Lucia	318 920	n.d.	n.d.	111 650	35	207 270	65	n.d.	n.d.

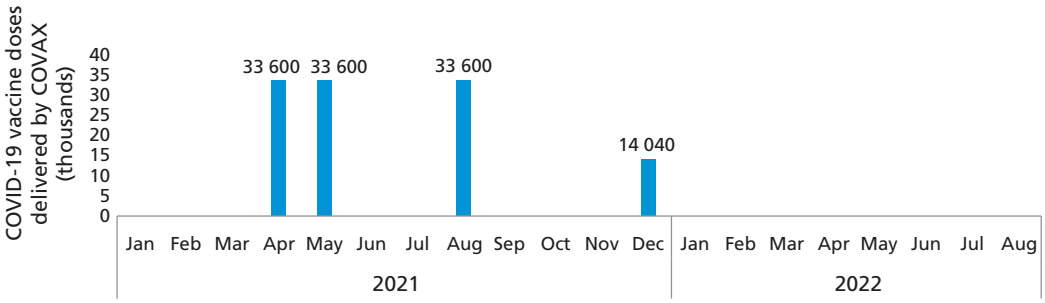
COUNTRY/ TERRITORY	TOTAL DOSES DELIVERED	BILATERAL/ MULTILATERAL AGREEMENTS		DONATIONS		COVAX		UNKNOWN	
	N	N	%	N	%	N	%	N	%
Saint Vincent and the Grenadines	282 860	n.d.	n.d.	145 100	51	137 760	49	n.d.	n.d.
Suriname	815 695	n.d.	n.d.	668 200	82	144 000	18	3495	0
Trinidad and Tobago	2 388 080	1 000 000	42	944 080	40	184 800	8		
Turks and Caicos Islands	80 121	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	80 121	100
United States of America	890 758 935	890 758 935	100	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Uruguay	9 618 700	8 285 635	86	500 000	5	148 800	2	684 265	7
Venezuela (Bolivarian Republic of)	47 270 544	15 131 000	32	500 000	1	16 756 800	35	14 882 744	32
Total	**2 638 659 329**	**2 285 766 987**	**87**	**78 250 915**	**3**	**159 316 550**	**6**	**114 592 877**	**4**

Note: The percentage refers to the total doses delivered per country.
Source: Developed by the Evaluation Team for the EPRC based on UNICEF COVID-19 Market Dashboard October 2022.

Annex Figure 20. Proportion of vaccines obtained though COVAX, timeline of the shipments, and number of COVID-19 vaccine doses provided

Annex Figure 20.1: Barbados

In Barbados, 22% of all COVID-19 vaccines were acquired through the COVAX mechanism.



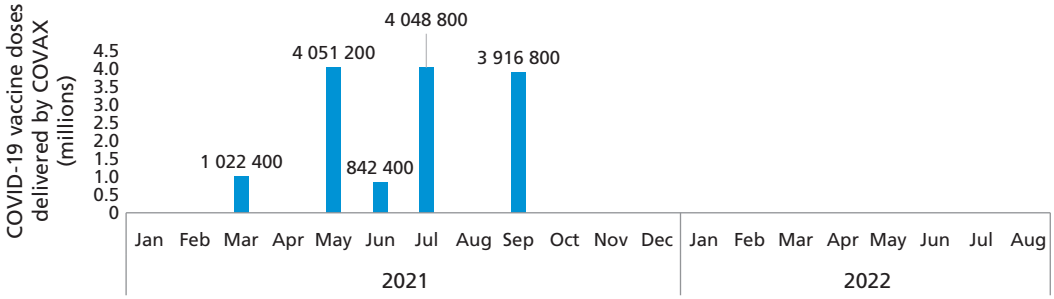
Sources: Developed by the Evaluation Team for the EPRC based the following:

United Nations Children's Fund. COVID-19 market dashboard. Statistics. New York: UNICEF; 2022. Available from: https://www.unicef.org/supply/covid-19-market-dashboard.

Reuters. Factbox: Vaccines delivered under COVAX sharing scheme for poorer countries. reuters.com. 25 November 2022. Available from: https://www.reuters.com/business/healthcare-pharmaceuticals/vaccines-delivered-under-covax-sharing-scheme-poorer-countries-2022-01-03/.

Annex Figure 20.2: Brazil

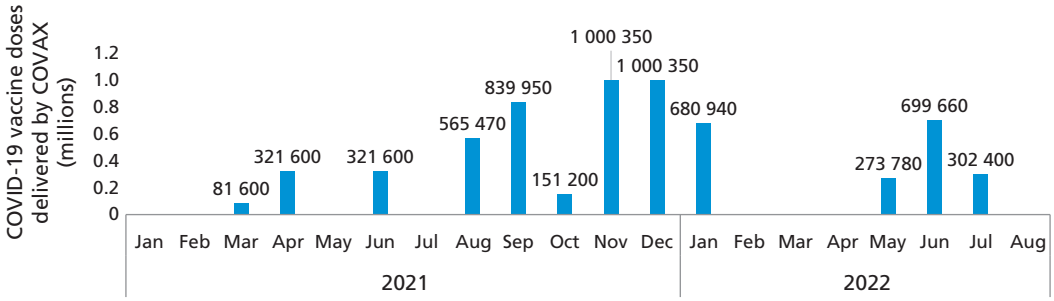
In Brazil, 2% of all COVID-19 vaccines were acquired through the COVAX mechanism.



Source: Developed by the Evaluation Team for the EPRC based on PAHO Data on COVID-19 vaccine arrivals in the Americas through COVAX mechanism.

Annex Figure 20.3: Guatemala

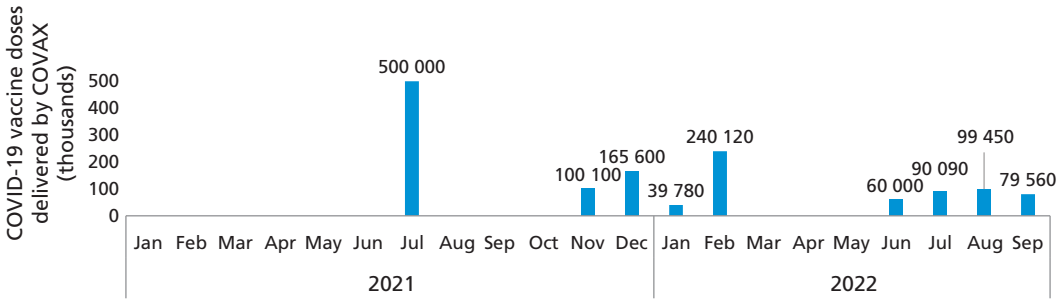
In Guatemala, 29% of all COVID-19 vaccines were acquired through the COVAX mechanism.



Source: Developed by the Evaluation Team for the EPRC based on PAHO Data on COVID-19 vaccine arrivals in the Americas through COVAX mechanism.

Annex Figure 20.4: Haiti

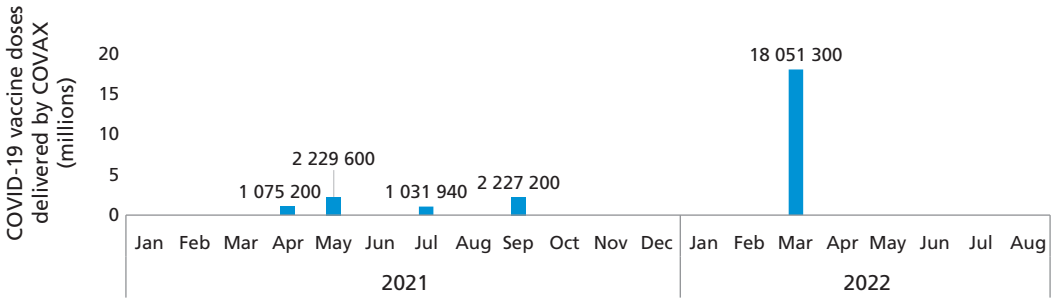
In Haiti, 100% of all COVID-19 vaccines were acquired through the COVAX mechanism.



Source: Developed by the Evaluation Team for the EPRC based on PAHO Data on COVID-19 vaccine arrivals in the Americas through COVAX mechanism.

Annex Figure 20.5: Mexico

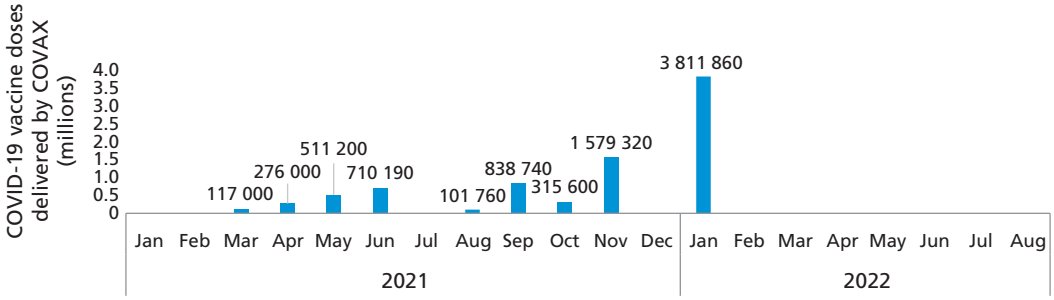
In Mexico, 11% of all COVID-19 vaccines were acquired through the COVAX mechanism.



Source: Developed by the Evaluation Team for the EPRC based on PAHO Data on COVID-19 vaccine arrivals in the Americas through COVAX mechanism.

Annex Figure 20.6: Peru

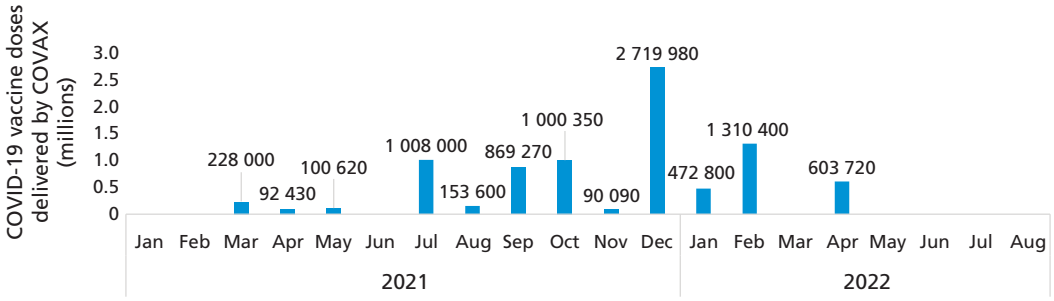
In Peru, 9% of all COVID-19 vaccines were acquired through the COVAX mechanism.



Source: Developed by the Evaluation Team for the EPRC based on PAHO Data on COVID-19 vaccine arrivals in the Americas through COVAX mechanism.

Annex Figure 20.7: Bolivia (Plurinational State of)

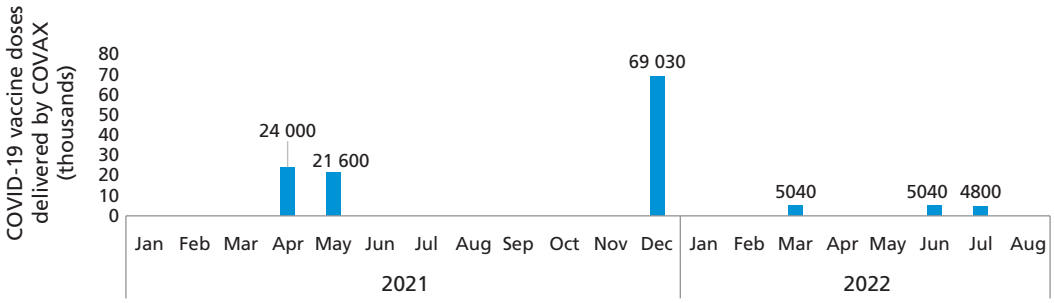
In Bolivia, 35% of all COVID-19 vaccines were acquired through the COVAX mechanism.



Source: Developed by the Evaluation Team for the EPRC based on PAHO Data on COVID-19 vaccine arrivals in the Americas through COVAX mechanism.

Annex Figure 20.8: Grenada

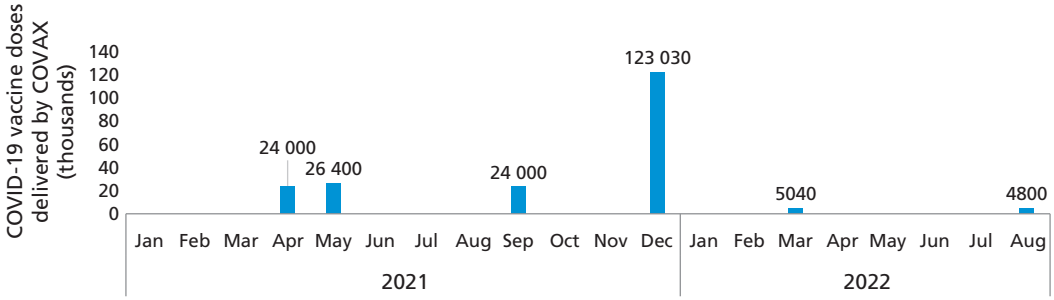
In Grenada, 57% of all COVID-19 vaccines were acquired through the COVAX mechanism.



Source: Developed by the Evaluation Team for the EPRC based on PAHO Data on COVID-19 vaccine arrivals in the Americas through COVAX mechanism.

Annex Figure 20.9: Saint Lucia

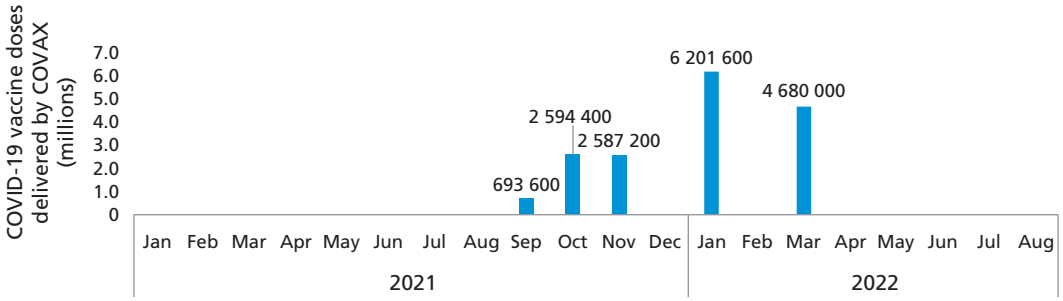
In Saint Lucia, 65% of all COVID-19 vaccines were acquired through the COVAX mechanism.



Source: Developed by the Evaluation Team for the EPRC based on PAHO Data on COVID-19 vaccine arrivals in the Americas through COVAX mechanism.

Annex Figure 20.10: Venezuela (Bolivarian Republic of)

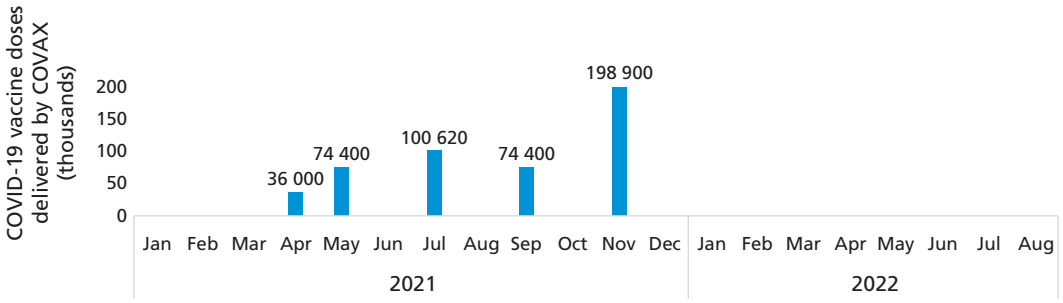
In Venezuela, 35% of all COVID-19 vaccines were acquired through the COVAX mechanism.



Source: Developed by the Evaluation Team for the EPRC based on PAHO Data on COVID-19 vaccine arrivals in the Americas through COVAX mechanism.

Annex Figure 20.11: Panama

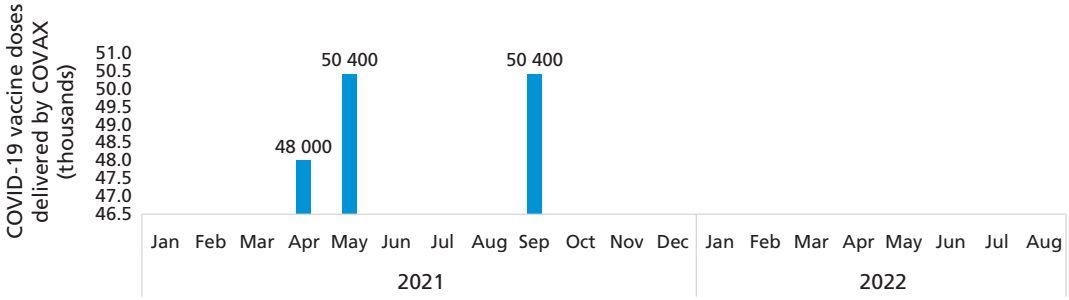
In Panama, 5% of all COVID-19 vaccines were acquired through the COVAX mechanism.



Source: Developed by the Evaluation Team for the EPRC based on PAHO Data on COVID-19 vaccine arrivals in the Americas through COVAX mechanism.

Annex Figure 20.12: Uruguay

In Uruguay, 2% of all COVID-19 vaccines were acquired through the COVAX mechanism



Source: Developed by the Evaluation Team for the EPRC based on PAHO Data on COVID-19 vaccine arrivals in the Americas through COVAX mechanism.

5.2. Effectiveness

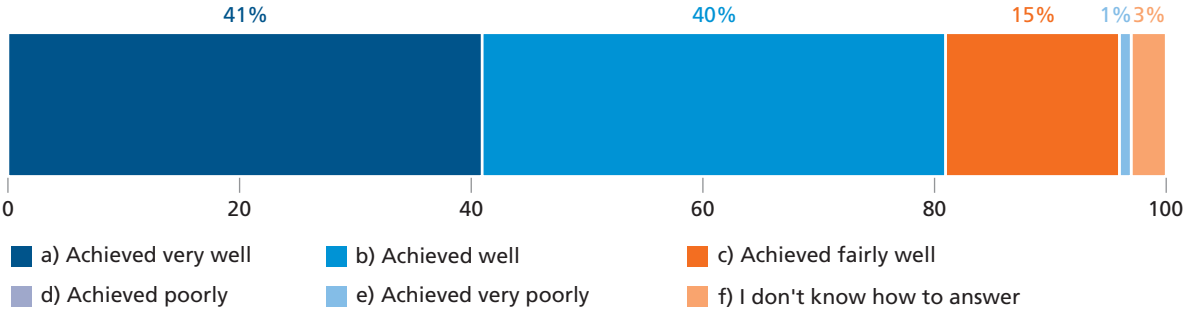
Survey response achievement of intended results

PAHO personnel's perception of overall positive performance during COVID-19 was also supported by 80% of respondents[16] who reported that PAHO's response to COVID-19 achieved its intended results well or very well (Annex Figure 21).

16 N = 316 males, 552 females.

Annex Figure 21. Perceptions of PAHO personnel regarding PAHO's response to COVID-19 achieved its intended results

In your view, to what extent has PAHO's response to COVID-19 achieved its intended results?



Source: EPRC Gallup and Kobo survey of PAHO personnel, 2022.

Most effective and least effective measures related to each of the 10 pillars

Findings related to each of the 10 pillars are presented below, particularly the most effective and least effective measures adopted during the pandemic.

Pillar 1: Coordination, planning, financing, and monitoring

PAHO has been working with other United Nations agencies to lead the health sector response and ensure that the United Nations system follows a holistic approach in supporting national authorities to tackle this pandemic and its repercussions. All countries in the Americas developed and implemented their COVID-19 national preparedness and response plans with guidance and support from PAHO. The pandemic required coordinated planning and joint actions across United Nations agencies, international agencies, academic institutions, NGOs, and other strategic actors.

Member States activated coordination mechanisms at the highest political level, through senior officials in key sectors and the active engagement of local authorities and community organizations. PAHO country office teams worked alongside government counterparts in the MoHs and other ministries to develop national crisis management plans and emergency response mechanisms, based on countries' transmission and risk levels, in order to prioritize actions, resources, and interventions. The 61 evidence-informed public health guidelines – 13 targeting decisionmakers – informed national strategies, policies, and protocols for an effective response to the pandemic.

Over the last three bienniums, there has been an increasing trend in financing the base budget of the Regional Office for the Americas, from 68% in 2016–2017 to 74% in 2020–2021. This is largely due to the ongoing collaboration between PAHO and WHO, and the advocacy by PAHO Member States for an equitable distribution of WHO funds across WHO headquarters and all regions. Despite these budget increases, the Region of the Americas continues to be the least funded among WHO major offices (regions and headquarters) *(102)*. Considering WHO strategic priorities, 67% of the increase is focused on strategic Priority 2 (1 billion more people better protected from health emergencies). In the case of PAHO, the budget revision included an increase in the WHO allocation to the Regional Office for the Americas of USD 39.5 million. This increased the allocation of WHO funds to the Region from USD 252.6 million to USD 292.1 million (a 35% increase compared with the 2020–2021 biennium allocation).

The COVID-19 platform *(58)* was a major contribution by PAHO, and it played a key role in encouraging contributions and reporting by country offices. It included cases, deaths, hospitalizations, and intensive care

unit (ICU) cases, by period and percentage of variations. Information regarding cases and deaths could be reviewed at the subnational levels. However, not all indicators were available for all countries; for example, hospitalization, percentage of hospital beds occupancy, number of ICU patients, and percentage of ICU beds occupancy. The Health in the Americas 2022 platform *(103)* includes open datasets, dashboards, data visualizations, narratives, maps, and other tools and resources for establishing baselines. This platform includes data for more than 80 health indicators and graphics already validated by countries, and has been standardized for efficient comparability and updating *(104)*.

Annex Table 24 presents the most and least effective measures adopted in relation to coordination, planning, financing, and monitoring.

Annex Table 24. Most and least effective measures adopted in relation to coordination, planning, financing, and monitoring

MOST EFFECTIVE MEASURES	LEAST EFFECTIVE MEASURES
• PAHO's long history of collaboration with MoHs in activating intersectoral coordination mechanisms in response to emergency situations and recent epidemics. Emergency committees already in place. • Highest political leadership involvement. • Elaboration of National COVID-19 preparedness and response plans; Activation of existing national emergency response committee(s). • Initial risk analysis and capacity assessment of countries' capabilities (mapping of risks and strengths). • Technical guidelines for organizing services, clinical management, laboratory procedures, and prevention and control measures. • Timely communication of data between PAHO headquarters and subregional and country offices. • Preparation for regulatory approval, market authorization, and post-market surveillance of COVID-19 products (e.g., laboratory diagnostics, therapeutics, vaccines).	• Preparation from PAHO to face the financial crisis and the pandemic was lacking. • PAHO needs to improve coordination with WHO and United Nations agencies. • PAHO monopolizes the response in health emergencies. • Unified and methodological criteria to deliver NPIs were lacking. • Coordination with other countries was missing for sharing best practices. Countries look for early clinical experiences in other countries to organize clinical care. • Delivery of products and reports financed by donors and partners was inefficient, with long response times. • The mandatory teleworking policy implemented by corporate mandate was difficult to follow due to needs in the countries. But when teleworking was implemented, it contributed to a better life-work balance.

Sources: Pan American Health Organization. Response to COVID-19 Outbreak in the Region of the Americas, Response Strategy and Donor Appeal Version 3 | 28 August 2020. Washington, D.C.: PAHO; 2020. EPRC Gallup survey; PAHO interviews to headquarters, PWR, country representatives, and strategic partners.

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

Health authorities implemented risk communication campaigns in order to disseminate accessible and reliable information on COVID-19, and public health advice on how to protect people from the virus.

PAHO developed and distributed risk communication tools across the Region for healthcare workers, the media, and leaders. Communication efforts to address vaccine hesitancy and build trust in countries' immunization programs has been one key challenge. Countries also adapted messages to the specific context and to be culturally sensitive, and they delivered them in an effective manner.

PAHO undertook different activities to help improve risk communication campaigns at the country level (Annex Table 25). For example, in Mexico, PAHO organized perception laboratories that analyzed and adapted the contents of messages in order to improve confidence in the public campaigns; to manage uncertainty regarding the trend and evolution of the different epidemic waves; or to mitigate the stigma and discrimination toward health personnel.[17]

In Guatemala, PAHO supported the MoH through rapid surveys to analyze barriers to vaccination against COVID-19 in every health area where they validated key messages (free vaccine, safety, collateral effects, voluntary, etc.); addressed topics and myths that required clarification (vaccine may cause death, includes a chip to control population, vaccines are bad, etc.); identified the best agents to deliver the health messages (radio, community visits, local leaders, teachers, etc.); and inquired into cultural issues relevant to supporting vaccination (indigenous language, positive contents, simple messages, avoiding technicalities) *(105)*.

PAHO support was key and important due to widespread misinformation, fake news, and disinformation on mass media channels and social networks. PAHO improved coverage by reaching millions of followers via social media (Facebook, 1.1 million; Twitter, 112.4 million; and Instagram, 505 million) and helped disseminate videos on YouTube (361 million views), articles on Google Scholar (19 200), and tweets (550 million reads) *(106)*.

PAHO supported and assisted in the development of national risk communication and community engagement plans that considered all segments of the population. PAHO's participation in press meetings as international experts was fundamental to clarifying doubts about vaccine effectiveness and reinforcing the need to enhance risk perceptions and conduct; to improving adherence to preventive measures; and to removing misconceptions, misbeliefs, and misinformation regarding COVID-19 and its prevention, control, and treatment. PAHO targeted groups via webinars, virtual courses, infographics, social media cards, radio spots, and videos. PAHO produced a total of 1026 infographics that offered guidance on protecting the health of workers *(107)*, older persons, and other vulnerable populations. A series of initiatives has been developed with the communities, in the local languages and with culturally appropriate and gender-sensitive content and messages.

Annex Table 25. Most and least effective measures adopted in relation to risk communication, community engagement, infodemic management

MOST EFFECTIVE MEASURES	LEAST EFFECTIVE MEASURES
• Massive risk communication strategies, campaigns, and tools for accessible and trusted information for health care workers, media communicators, leaders, and communities • Community-wide measures to restrict movement of the population • The Perceptions Laboratory, a model for the Region and decentralized to state labs, so that messages will be adapted to the epidemiological context, are culturally sensitive, and are delivered in an effective manner • Risk communication for vaccine hesitancy and to build trust in national immunization programs • Management of the infodemic to ensure that evidence-based factual information dispels rumors, misinformation, and disinformation	• Sharing experiences (best practices) and information with countries • Struggles in giving a coherent message in terms of uncertainty of transmission, use of preventive measures, role of the asymptomatic in transmission, etc.

Sources: Pan American Health Organization. Response to COVID-19 Outbreak in the Region of the Americas, Response Strategy and Donor Appeal Version 3 | 28 August 2020. Washington, D.C.: PAHO; 2020. EPRC Gallup survey; PAHO interviews to headquarters, PWR, country representatives, and strategic partners.

17 Confidential document provided by the Ministry of Health.

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

To slow COVID-19 transmission, social and public health measures were applied to entire affected communities. One of the most successful strategies implemented by PAHO were the immediate actions taken to strengthen the regional capacity of surveillance systems to detect COVID-19 cases, supported by routine severe acute respiratory infections/influenza-like illness (SARI/ILI), event-based surveillance, and the sentinel surveillance systems *(108))* (Annex Table 26).

Annex Table 26. Most and least effective measures adopted in relation to surveillance, epidemiological investigation, contact-tracing, and adjustment of public health and social measures

MOST EFFECTIVE MEASURES	LEAST EFFECTIVE MEASURES
• Enhancement or adaptation of existing respiratory disease surveillance systems, indicator-based surveillance, and event-based surveillance (i.e., systematic collection and assessment of media reports and rumors); influenza-like illness and severe acute respiratory infection surveillance and/or other syndromic surveillance (sentinel) • CDC-PAHO partnership contributed to strengthening the surveillance system (genomic surveillance) • PAHO's development of guidelines for the Implementation and Management of Contact-Tracing for Coronavirus Disease 2019 (COVID-19), and training of over 35 countries; 21 are already integrating a contact-tracing system (Go.Data) • Rapid response teams, and case investigation: Home brigades' community-based teams to trace contacts. Lab-moto transport system to bring lab samples from remote areas to the national lab to be tested • PAHO hub of information (dashboards and excess mortality analysis) • Universal and nominal surveillance	• Case contact and open testing requires a significant scaling up of human resources, financial investment, and innovative tools and maintenance to ensure surveillance • Despite massive diagnostic capacity it was not executed as a coherent policy (criticism from the opposition and academic field) • Other indicators used (such as bed utilization) instead of testing per case • PAHO headquarters' support could have been stronger • Implementation of public health measures applied indiscriminately to entire affected communities in order to slow transmission capacity • Contact-tracing and quarantine, adapted to the legal, social, economic, cultural, and epidemiological context of each country or territory, and respecting human rights • Gaps in human resources and a lack of incentives; difficulties in connectivity; shortages of PPE and logistics to carry out case investigation and contact-tracing, testing, and triage

Sources: Pan American Health Organization. Response to COVID-19 Outbreak in the Region of the Americas, Response Strategy and Donor Appeal Version 3 | 28 August 2020. Washington, D.C.: PAHO; 2020. EPRC Gallup survey; PAHO interviews to headquarters, PWR, country representatives, and strategic partners.

PAHO adopted innovative tools for outbreak investigation, specifically Go.Data, which integrate functionalities for case investigation, contact follow-up, and visualization of chains of transmission *(109)*. Together with the Global Outbreak and Response Network (GOARN), PAHO trained over 30 countries, and 21 of them integrated Go.Data into their COVID-19 pandemic response. PAHO also developed the COVID-19 risk assessment tool for health authorities to assess their vulnerability and the risk of COVID-19 spreading. This included estimating the need for hospital beds and health workers, PPE, supplies, and medicines. This enabled countries to determine the number of individuals at increased risk of severe COVID-19 due to underlying conditions; formulate possible strategies to shield extremely vulnerable people from infection; manage chronic conditions; and guide vaccine allocation for those at highest risk *(110)*.

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

COVID-19 control strategies centered on the use of nonpharmaceutical interventions, including personal protective measures, environmental measures, physical distancing, and international travel measures *(111)*. PAHO provided national authorities with a framework and technical guidelines for social distancing and travel-related measures (testing before travel). PAHO worked with national authorities to disseminate risk communication materials in spaces where incoming travelers could find information, including IPC measures to reduce the risk of infection. By September 2020, most of the countries in the Caribbean subregion had begun to resume nonessential travel to reactivate their tourism-dependent economies. This was later adopted by most countries as a political decision driven by economic pressures rather than the result of a risk assessment process *(112)* (Annex Table 27).

Annex Table 27. Most and least effective measures adopted in relation to points of entry, international travel and transport, mass gatherings and population movement

MOST EFFECTIVE MEASURES	LEAST EFFECTIVE MEASURES
• EMTs contributed to clinical care in border and remote areas, providing access to services for migrants and Indigenous populations • PAHO worked with national authorities to disseminate risk communication materials for incoming travelers with clear and evidence-based information • PAHO issued guidance on resuming nonessential international travel, with emphasis on testing before or after international travel • Rapid health assessment and isolation facilities for quarantine and isolation of COVID-19 cases and contacts (tourists and refugees) in special facilities or hotels • Guidelines for massive gatherings around 26 political elections in the Region	• Border control, lockdowns, and border closures implemented with no clear evidence that they reduced the spread of COVID-19 • All countries and territories in the Americas have maintained essential travel • By September 2020, most of the countries and territories in the Caribbean subregion began to resume nonessential travel to reactivate their tourism-dependent economies • IHR were not implemented as written and lacked accountability and transparency. Even countries that responded performed poorly. • Challenges in points of entry: migrants and refugees (Colombia/Venezuela [Bolivarian Republic of]; Guatemala/Mexico; Dominican Republic/Haiti; Mexico/United States)

Sources: Pan American Health Organization. Response to COVID-19 Outbreak in the Region of the Americas, Response Strategy and Donor Appeal Version 3 | 28 August 2020. Washington, D.C.: PAHO; 2020. EPRC Gallup survey; PAHO interviews to headquarters, PWR, country representatives, and strategic partners.

The "indirect" effect of PAHO support ensured institutions and systems in many countries continued to function by providing technical guidelines to inform political decisions in order to guarantee safety to the populations and, for example, security to the electoral process. PAHO's technical guidance for preventing mass gatherings was a key measure in the lead-up to 26 political elections that took place in the Region during the pandemic.

PAHO has been a key actor in coordinating health care strategies and quarantine options (hotels, camps, houses) for groups on the move. Border controls created challenges, particularly where social and economic reasons motivated historical movement of migrants and refugees (Colombia/Venezuela [Bolivarian Republic of], Guatemala/Mexico, Dominican Republic/Haiti, Mexico/United States).

Pillar 5: Laboratory and diagnostics

The Americas developed a strong influenza laboratory surveillance network (30 national influenza centers [NICs] in 26 countries) with molecular diagnosis platforms regularly evaluated by the WHO Global Influenza Surveillance and Response System (Annex Table 28). Building upon the strengths of the influenza detection and surveillance network, PAHO rapidly trained the NICs, as well as several national public health laboratories and the Caribbean Public Health Agency laboratory, on the recommended Charité-Berlin protocol to detect and confirm COVID-19 cases. As a result, 36 countries have each implemented molecular diagnostic methods in at least one national public health and reference laboratory, and at least 18 countries have in-country sequencing capacity.

PAHO supported countries to strengthen their capacity for timely access to enzymes, critical reagents, and testing material, and continued the donation of laboratory reagents and supplies to at least 36 countries in the Region *(113)*. Despite the efforts made to support the national public health laboratories, where the diagnostics have been centralized, the continued increase in the number of cases and associated samples received exceeded the capacities in most of the laboratories, resulting in a severe delay in the number of samples processed (more than 30% in some countries). This has significantly affected the turnaround of the results, which are key for the implementation of timely control measures. Private laboratories provided serological and polymerase chain reaction (PCR) diagnosis to the population, and the results were fed back to the MoHs. The epidemiological impact of this on improved surveillance is not available.

Annex Table 28. Most and least effective measures adopted in relation to laboratory and diagnostics

MOST EFFECTIVE MEASURES	LEAST EFFECTIVE MEASURES
• 30 national influenza centers (NICs) in 26 countries with molecular diagnosis platforms • NICs, several national public health laboratories, and the Caribbean Public Health Agency (CARPHA) laboratory trained by PAHO on the protocol to detect SARS-CoV-2 and confirm COVID-19 cases • Molecular diagnostic methods implemented in 36 countries and territories; 18 countries have in-country sequencing capacity • Countries supported by PAHO to strengthen their capacity for timely access to enzymes, critical reagents and testing material, including quality assurance assay panels to at least 36 countries • Guidelines for the implementation of new virologic diagnostic methods and rolling out of antigen-based rapid detection test (Ag-RDT) • Regional Network for Genomic Surveillance of COVID-19 (20 countries) • Evaluation of the commercial diagnostic kits and genomic surveillance by eight countries from Central America and the Spanish-speaking Caribbean.	• Diagnostics have been centralized • The increase in the number of cases has exceeded capacity in most of the laboratories, producing a lag in samples to be processed • Diagnostic test acquisition required the authorization of one single person from Washington, D.C., who was also involved in technical cooperation

Sources: Pan American Health Organization. Response to COVID-19 Outbreak in the Region of the Americas, Response Strategy and Donor Appeal Version 3 | 28 August 2020. Washington, D.C.: PAHO; 2020. EPRC Gallup survey; PAHO interviews to headquarters, PWR, country representatives, and strategic partners.

The rolling out of an antigen-based rapid detection test (Ag-RDT) has allowed all countries to decentralize and increase their testing capacity. WHO launched the COVID-19 ACT-Accelerator (Access to COVID-19 Tools) Diagnostics Partnership. Aligned with this initiative, PAHO developed guidelines for the introduction and implementation of alternative virologic diagnostic methods, to complement and scale up diagnostic capacity and increase access to testing for remote areas and vulnerable populations. PAHO also donated millions of COVID-19 PCR tests and Ag-RDTs through PAHO's Regional Revolving Funds.

PAHO/WHO has supported countries to strengthen surveillance within the framework of the Regional Network for Genomic Surveillance of COVID-19. Through this network, PAHO supported over 20 countries from all four subregions to generate high-quality SARS-CoV-2 genomic sequence data through next-generation sequencing and share their genomic sequences in a timely manner *(114)*.

Pillar 6: Infection prevention and control (IPC) and protection of health workforce

All countries of the Americas have implemented measures to reinforce IPC, and 33 countries reported having a national IPC program and water, sanitation, and hygiene (WASH) standards in healthcare facilities. These were reorganized with a focus on improving triage and isolation in order to reduce human-to-human transmission in healthcare facilities. International procurement of essential response goods such as PPE has been challenging due to an increase in global demand, restrictions on air freight, and shipping and export bans imposed by manufacturing countries. Countries have had to find ways to produce locally, including converting factories – set up for other purposes – to produce their own PPE and essential medical devices. PAHO continues to work with MoHs to estimate needs for PPE, essential medicines, and other supplies based on epidemiological trends and projections (Annex Table 29).

Annex Table 29. Most and least effective measures adopted in relation to infection prevention and control (IPC), and protection of health workforce

MOST EFFECTIVE MEASURES	LEAST EFFECTIVE MEASURES
• 33 countries reported having a national IPC program and WASH standards in healthcare facilities • Updated information, guidelines, and recommendations for appropriate use of personal protective equipment provided, and IPC guidance for home and community care providers • Early activation of the incident management system (IMS), which was effective in providing support and strategic guidance • Development of emergency health units for warning and response • Improving triage and isolation of cases to reduce human-to-human transmission in healthcare facilities • Community-based strategies for ambulatory care • Construction of special facilities (hotels) for COVID-19 cases and contacts for quarantine and isolation (tourists and refugees) • Procurement of essential response goods such as personal protective equipment (PPE) and materials, equipment, and supplies for ICUs	• The IMS was designed for short-term emergency responses but may not be sustainable for longer-term emergencies

Sources: Pan American Health Organization. Response to COVID-19 Outbreak in the Region of the Americas, Response Strategy and Donor Appeal Version 3 | 28 August 2020. Washington, D.C.: PAHO; 2020. EPRC Gallup survey; PAHO interviews to headquarters, PWR, country representatives, and strategic partners.

Pillar 7: Case management, clinical operations, and therapeutics

Throughout 2020, PAHO shared guidance on evidence-based case management and therapeutics for COVID-19 through an *Ongoing Living Update of COVID-19 Therapeutic Options: Summary of Evidence*. A new referral system was set up to bring patients to ICUs designated for the COVID-19 response, and that provided appropriate medical equipment for treatment. The COVID-Therapy database is the result of this ongoing (daily) effort to update the therapeutic options for COVID-19, and it presents an evidence summary of 235 pharmacological interventions for the management of COVID-19. This is supported by a live systematic review of evidence from 734 studies to date, periodically updated in the PAHO Institutional Repository for Information Sharing *(115)*.

There were moderate levels of preparedness in laboratory capacity for diagnosis of SARS-CoV-2, isolation, and case management, as indicated by a COVID-19 readiness self-assessment survey *(116)*. This was conducted between January and April 2020 in more than 579 hospitals (public and private) in 19 countries. Scores were lowest for areas related to the care of patients requiring critical care and the availability of equipment for medical care, including PPE and ventilators. An analysis of four countries (Chile, Colombia, Mexico, and Peru) indicated an increase of 161% in critical care capacity between Mar 2020 and Mar 2021, with occupancy rates as high as 93% in January 2021. Brazil reported an increase of 61% in ICU capacity (including the private sector) between February 2020 and January 2021: 24 states and the Federal District had occupancy rates for ICU equal or greater than 80% in Mar *(117)*. Most and least effective measures adopted in relation to Pillar 7 are presented in Annex Table 30.

Annex Table 30. Most and least effective measures adopted in relation to case management, clinical operations, and therapeutics

MOST EFFECTIVE MEASURES	LEAST EFFECTIVE MEASURES
• Mapping referral facilities including ICU and bed capacities to identify alternative facilities that could provide treatment, and to set up screening, triage, and isolation areas • Clinical management, treatment guidelines of severe cases, and management at ICUs • *Ongoing Living Update of COVID-19 Therapeutic Options: Summary of Evidence*. Systematic review • COVID-19 readiness self-assessment in more than 579 hospitals (public and private) in 19 countries • Organization of EMTs in auditoriums, stadiums, and other existing spaces suitable for being adapted to specialized medical care • 58 safer and greener ("smart") health facilities providing health care across seven countries in the Caribbean used as respiratory clinics or sites for COVID-19 vaccination campaigns because of their strategic location, improved functionality, and ability to guarantee the cold chain to safely store vaccines	• Moderate levels of preparedness in case management: guidelines were not available at the first moment; support from external experts from China, Japan, Portugal, and Spain • Gaps in human resources and a lack of incentives; difficulties in connectivity; shortages of medicines, supplies, medical devices, PPE, and logistics to carry out testing, triage, and home care • Ensuring sufficient and uniform training, the supplies required for their operation, and the data entered into the Member States' health information system • Challenges in accessing essential health technologies for the response, such as in vitro diagnostics, ventilators, and PPE due to export restrictions imposed by manufacturing countries • Increase in the costs of essential supplies

Sources: Pan American Health Organization. Response to COVID-19 Outbreak in the Region of the Americas, Response Strategy and Donor Appeal Version 3 | 28 August 2020. Washington, D.C.: PAHO; 2020. EPRC Gallup survey; PAHO interviews to headquarters, PWR, country representatives, and strategic partners.

Countries struggled to provide patients with continued intensive care, and this was further compounded by long COVID. Other challenges to health services at country level included gaps in human resources and a lack of incentives; difficulties in Internet connectivity to provide training and resources for telemedicine; shortages of medicines, supplies, medical devices, PPE, and logistics to carry out case investigation and contact-tracing and testing, triage, and home care, among others. PAHO trained over 70 000 health workers in case management and therapeutics.

Countries have particularly experienced challenges in accessing essential health technologies for the response, such as in vitro diagnostics, ventilators, and PPE, due to export restrictions imposed by manufacturing countries. Border closures and limited flights hindered access and increased the costs of essential supplies.

Pillar 8: Operational support and logistics, and supply chains

PAHO has made QA a critical component of its technical support for procuring goods, supplies, and equipment. The pandemic severely interrupted regular supply chains for medical supplies and equipment. It also disrupted commercial flights that PAHO relied upon to deploy experts and transport medicines, supplies, and equipment. Countries found themselves in a complex market for procuring supplies and medicines, requiring permanent quality control of items produced by unreliable actors. PAHO has been supporting and advising countries on regulatory frameworks related to procurement, shipping, freight, logistics, and technical specifications for PPE, oxygen concentrators, in vitro diagnostics, and other supplies and equipment critical to the COVID-19 response. PAHO has shared tools to help quantify essential supplies provide information on the current global market situation; identify qualified suppliers; and share pricing information for the procurement of medical equipment and supplies. Most and least effective measures adopted in relation to Pillar 8 are presented in Annex Table 31.

Annex Table 31. Most and least effective measures adopted in relation to operational support and logistics, and supply chains

MOST EFFECTIVE MEASURES	LEAST EFFECTIVE MEASURES
• Procurement, shipping, freight, logistics, and technical specifications for PPE, equipment, and critical medical supplies: oxygen concentrators, diagnostics, and other goods/supplies, especially for ICU ventilators and medicines • Shared tools to help quantify essential supplies; provide information on the current global market situation and identify qualified suppliers; and calculate needs estimates for PPE, essential medicines, and other supplies based on epidemiological trends and projections • Promotion of local sources of production; converting factories (PPE) • Quality assurance, a critical component of its technical support to procuring goods, supplies, and equipment • PAHO's regional warehouse (Panama) for emergency stocks of supplies and equipment to assemble COVID-19 PPE and emergency kits • Facilitation of access to international suppliers in the Region • Mobilization of donor resources and reorientation of cooperation funds	• Severe interruptions of regular supply chains for medical supplies and equipment; lack of supplies • PAHO did not have stockpiles of PPE, preapproved provider lists, or exclusivity agreements • Complex market for procuring supplies and medicines • Quality control of products • Could support on experience from other logistic agencies

Sources: Pan American Health Organization. Response to COVID-19 Outbreak in the Region of the Americas, Response Strategy and Donor Appeal Version 3 | 28 August 2020. Washington, D.C.: PAHO; 2020. EPRC Gallup survey; PAHO interviews to headquarters; PWR, country representatives, and strategic partners.

Pillar 9: Strengthening essential health services and systems

The pandemic created unprecedented pressure on health systems and services. Priority given to managing the pandemic interrupted routine health services and programs, including vaccination campaigns, sexual and reproductive health services, malaria elimination, tuberculosis (TB) prevention and control, and programs for noncommunicable diseases (NCDs). The situation was compounded by the stress and exhaustion experienced by healthcare workers. The majority of these were women, who were at high risk of burnout. This further constrained the capacity of local health systems. Most and least effective measures adopted in relation to Pillar 9 are presented in Annex Table 32.

Annex Table 32. Most and least effective measures adopted in relation to strengthening essential health services and systems

MOST EFFECTIVE MEASURES	LEAST EFFECTIVE MEASURES
• Development of guidance and tools to inform countries how to assess existing resources • PAHO/WHO Virtual Campus for Public Health, hosting eight online WHO courses, which PAHO has translated into Portuguese and Spanish; massive training on COVID-19 preventive/care measures • Guidance on rights and responsibilities of health workers, including measures to protect occupational safety with special consideration for the needs of female health workers • Home brigades and community-based strategies for detecting cases and tracing contacts; triage and healthcare provision • Deployment of 100 national EMTs and operationalization of 129 alternative medical care sites (AMCSs), providing a total of 6899 inpatient beds and 1078 critical care beds • Successful additional funding from other organizations and countries, including funding for mental health and NCDs • Essential Health Services survey (February–March 2021) indicates important disruptions of essential services • 20 countries have begun reorganizing their first levels of care • Mechanisms provided to maintain availability of essential medications, equipment, and supplies • Lab technology transfer to neighboring countries	• Public health technical support was compromised by politics • Health systems lack incident command response; enormous managerial, operational, methodological, and conceptual insufficiency • Lack of a multithreat approach to disasters: inclusion and equity with a strategy centered on the community, family, and person • Priority given to managing the pandemic interrupted other routine health services and programs • Stress and exhaustion of healthcare workers • Human resources gap as well as the lack of incentives • Difficulties in connectivity; shortages of medicines, supplies, medical devices, and PPE; and insufficient logistics for conducting case investigation and contact-tracing, testing, triage, home care, management of call centers, and teleconsultations • Continuity of essential health services (equity and gender)

Sources: Pan American Health Organization. Response to COVID-19 Outbreak In the Region of the Americas, Response Strategy and Donor Appeal Version 3 | 28 August 2020. Washington, D.C.: PAHO; 2020. EPRC Gallup survey; PAHO interviews to headquarters, PWR, country representatives and strategic partners.

COVID-19 has particularly affected the continuity of essential services provided at the first level of care. The preliminary results from the Essential Health Services survey indicated important disruptions to essential services. The percentage of countries reporting partial or severe disruption of services varies by program areas: 55% for family planning and contraception; 47% antenatal care; 39% and 37% routine immunization services in health facilities and outreach, respectively; 47% NCD diagnosis and treatment; 47% cancer diagnosis and treatment; and 77% mental health services. Twenty countries started to reorganize their systems for providing the first level of care to respond to the pandemic *(94)*.

Given the disruptions to health services in the Region, the level of assistance and collaboration provided by PAHO helped Member States to ensure equitable, sustainable, and resilient health systems (see section 2.5, Sustainability, in the main report).[18]

Pillar 10: Vaccination

The second stage of the COVID-19 response began with the arrival of WHO-approved vaccines. The COVID-19 Vaccines Global Access (COVAX) Facility, launched in June 2020, aimed to accelerate the development, manufacturing, and delivery of and equitable access to COVID-19 vaccines. PAHO provided ongoing support and guidance to prepare the COVID-19 national vaccination deployment plans as well as strategies related to financing the procurement of vaccines.

High-income countries (HICs) failed to adequately contribute financially and thus guarantee universal vaccine access. Double-standard vaccination targets (20% for low- and middle-income countries [LMICs] and 50% for HICs) were introduced in the COVAX self-financing mechanism *(118)*. Wealthy countries procured vaccine doses through bilateral deals with multiple manufacturers.

This vaccine nationalism resulted in wastage of expired vaccines. By January 2022, less than 10% of LMIC populations had received a single dose of COVID-19 vaccine *(119)*.

In the Americas, the PAHO Regional Revolving Funds (RRF) are the recognized procurement mechanism for COVAX.[19] This was considered to be the most suitable mechanism for providing equitable access to COVID-19 vaccines in the Region on behalf of the 10 countries eligible for AMC financing and the 28 self-financing countries and territories in the COVAX portfolio in the Americas. PAHO/WHO estimated that the initial economic burden of the new COVID-19 vaccines could be 12–18 times a country's annual national immunization budget. In order to acquire the vaccine for 20% of their total population – the quantity required to target the groups most at high risk – countries would have needed to invest up to three times their annual immunization budgets in 2021. The introduction of the new COVID-19 vaccines placed unprecedented fiscal pressures on national budgets of the 27 self-financing countries in the Americas, with the transfer of more than USD 433 million in down/upfront payments to the COVAX Facility during October 2020 and an additional USD 660 million in financial guarantees *(120)*.

---

18 This is based on interviews with PAHO personnel as well as country office staff (MoH) and other strategic partners. Pan American Health Organization. Evaluation of the Pan American Health Organization Response to COVID-19 2020–2022. Volume I. Final Report. Washington, D.C.: PAHO; 2023.

19 For more than 40 years, the PAHO Regional Revolving Funds have supported 42 Member States and Territories to capture forecasted demand of vaccine, syringe, and other related immunization supplies across the Region and leverage economies of scale to ensure access to high-quality vaccines at affordable prices.

PAHO supported 28 countries to evaluate their cold chain capacities and update their cold chain equipment inventories, including logistics requirements for vaccine distribution. The *Guidelines to Plan for COVID-19 Vaccine Introduction* assisted national immunization programs in planning for COVID-19 vaccine introduction and supported the development and costing of comprehensive COVID-19 vaccination plans. Information on the impact of the pandemic on the functioning of such plans was informed by findings from a series of seven surveys conducted in 44 countries and territories in the period April–December 2020 *(121)*.

PAHO encouraged countries to strengthen their information systems, vaccine safety, and the surveillance of events supposedly attributable to vaccination or immunization (ESAVI) and adverse events following COVID-19 and other vaccine immunization (AEFI). Together with WHO, PAHO developed the Vaccine Introduction Readiness Assessment Tool (VIRAT), a planning road map to prepare for COVID-19 vaccine introduction, with 35 countries populating a dashboard to provide an overview of regional readiness.[20] The most and least effective measures adopted in relation to Pillar 8 are presented in Annex Table 33.

Annex Table 33. Most and least effective measures adopted in relation to vaccination

MOST EFFECTIVE MEASURES	LEAST EFFECTIVE MEASURES
• Preparation for the introduction and deployment of COVID-19 vaccines • Strategies related to financing the purchase of vaccines and addressing vaccine hesitancy (funds availability) • Equity approach with COVAX Initiative • Vaccine Introduction Readiness Assessment Tool (VIRAT) • Improved supplies for vaccine delivery (cold chain equipment) • Supported the establishment of a regional ESAVI/AEFI surveillance system • Support by PAHO to improve population confidence in the immunization program and achieve a high uptake of COVID-19 vaccines • Dashboard integrating updated information on 12 COVID-19 vaccines, with information on the authorization status, efficacy, safety, administration, and logistics of available vaccines	• Monopolizing practices by developed countries • Government collateral agreements for acquisition of vaccines • Cold chain requirements • Slow vaccination rollout • Performance of PAHO's Regional Revolving Funds needs to be improved • Vaccines not approved by WHO (CoronaVac) challenge equity and negatively influence routine programs • Cost of new COVID-19 vaccine could be 12–18 times the country's annual national immunization budget, putting unprecedented fiscal pressures on national budgets

Sources: Pan American Health Organization. Response to COVID-19 Outbreak in the Region of the Americas, Response Strategy and Donor Appeal Version 3 | 28 August 2020. Washington, D.C.: PAHO; 2020. EPRC Gallup survey; PAHO interviews to headquarters, PWR, country representatives, and strategic partners.

The main factors (internal, external) that compromised PAHO's response

External and internal factors compromising PAHO's response are presented in Annex Table 34.

20 The VIRAT regional dashboard is available from: https://ais.paho.org/imm/IM_VIRAT.asp.

Annex Table 34. External and internal factors compromising PAHO's response

EXTERNAL (WHO, UNITED NATIONS, STRATEGIC PARTNERS, COUNTRY)	INTERNAL (PAHO)
• WHO: excessive centralization of political, strategic, technical, and administrative decisions in Geneva • Internal communication was not fluid, no opportune sharing of strategic information • Dependence on WHO for vaccine purchase and distribution (COVAX)	• Financial crisis and availability of resources • Poor coordination within, no regular meetings to coordinate the incident managers at country level • Lack of operational infrastructure and cohesive work between headquarters and country offices • The communication was top-down • Poor coordination with other agencies
• Strategic plans were affected and impaired by the monopolizing practices of developed countries • Bilateral agreements by governments threatened equitable distribution of vaccines worldwide • Resources and supplies were limited • Solidarity failed; no humanitarian help provided by other countries • Closing borders, lockdowns • Weak relationship with local institutions	• Addressing the supplies and vaccine shortages • Procurement: lack of supply procedures and of proper communication, everything goes through emergency operations • Budget, purchase, shipping, distribution of medical supplies and vaccines • Challenges in restocking Panama warehouse due to delays in procurement resulted in the rejection of requests from the countries in need due to the fear of losing stock and the unsuccessful restocking of the warehouse
• The turnover of MoH • Lack of trained and specialized personnel for emergency response • Low retention of HRH • Burnout of health personnel, stigma, no incentives	• Human resources do not match the regional epidemiological needs • Lack of specialized personnel for emergencies at the subregional level • Natural turnover, incident manager, PWRs, and others (Annex 8. Turnover of PAHO/WHO Representatives) • Teleworking mandates
• Political context: restless, insecurity • Politicization of pandemic: leadership, decisionmaking • Political tension and leadership roles conflicts • Pressure from economic interests/groups for acquisition of supplies, relaxing closures of public venues (bars, restaurants, tourism, etc.) • Migrants and refugees (Colombia/Venezuela [Bolivarian Republic of]; Guatemala/Mexico; Dominican Republic/Haiti)	• Tension between political and technical decisionmaking particularly in presidential commissions • Differences among PWRs and MoH • Slow response from headquarters to country requirements

(Continued)

EXTERNAL (WHO, UNITED NATIONS, STRATEGIC PARTNERS, COUNTRY)	INTERNAL (PAHO)
• Vaccination; infrastructure, cold chain equipment, prioritization plans, bilateral agreements • Lack of political will toward vaccination by presidents • Infodemic: vaccine hesitancy in populations and health personnel, beliefs/myths, mistrust, lack of information • Lack of nominal database to follow up vaccination schedules • Local legislation impedes bilateral agreements with industry to buy vaccines • Poor gender-based communication and implementation strategies	• COVAX failure • Revolving and Strategic Funds • Equity and gender risk communication
• Lack of supplies and resources: diagnostics, ICU, oxygen tanks, ventilators, medicines for critical care, vaccinations supplies (syringes, needles), cold chain equipment, reorganization of healthcare services, Internet connectivity (telemedicine) • Exclusivity contracts • Total dependence on China in the procurement of PPE and medical supplies	• Supply chains, distribution, logistics, rely on external partners, purchase, shipping • Public/private alliances
• Overlapping natural emergencies and disasters	• Emergency response teams' takeover by COVID-19

List of challenges and actions taken by ministries of health and PAHO

The EPRC[21] identified the following challenges,[22] presented alongside some of the actions taken by MoHs, and also initiatives, recommendations, or actions deployed by PAHO (Annex Table 35).

Annex Table 35. Challenges and actions taken by ministries of health and PAHO

CHALLENGES	ACTIONS TAKEN BY MOH	PAHO RESPONSE AND RECOMMENDATIONS
• IHR compliance: low implementation as written, and lacked accountability and transparency; limited scope	• Lack of compliance in preparation and response to public health emergencies	• Insist on the importance of voluntary reporting • New reassessment
• Coherent strategy for the implementation of mitigation and containment measures, and nonpharmaceutical interventions (NPIs)	• Heterogeneous response by MoH	• Preparation of 154 technical guidelines, recommendations respecting human rights

21 Based on interviews.

22 Reported by country representatives and MoH officials interviewed.

(Continued)

CHALLENGES	ACTIONS TAKEN BY MOH	PAHO RESPONSE AND RECOMMENDATIONS
• Collateral impact of NPIs (economic, social, mental health)	• Early relaxation of measures by political and economic pressures	• Guidelines and support for mental health care of personnel and populations
• National interests and priorities	• Political decisionmaking	• Respect sovereignty of countries • Emergency response plans
• Health literacy of decisionmakers, health personnel, and populations	• Improvisation of expertise	• Virtual Campus: >249 trainings by webinar • Dissemination of science-based information • Health literacy, communication workshops and training of high-level personnel
• Infodemic, stigma of infection even among health personnel, social networks	• Counteract massive dissemination of rumors, misinformation, and false information (fake news)	• Enhanced risk communication strategies that are culturally appropriate and target vulnerable populations to enhance compliance and adherence to vaccination programs • Health perceptions surveys and laboratories
• Effective testing: Early diagnosis sensible test, identification of SARS-CoV-2 variants; Affordability, sensitivity of testing kits	• Development of diagnostic capacity for surveillance, case investigation, and contact-tracing, open testing of cases • Underreporting of cases • Virologic and genomic surveillance	• Epidemiological Intelligence • Strengthening of laboratory networks, training of personnel, lab supplies and diagnostic kits (19.5 million PCR tests, 6.7 million AgRDTs), genomic capabilities (330 000 genomic tests, 34 PCR primers), expert supervision, guidelines for testing and contact-tracing apps (Go Data) • Community-based strategies
• Effective and quality care protocols	• Clinical case management (improvisation, uncertainty at the start of the pandemic)	• Technical guidelines for care and case management (triage), organization of critical care, treatment options
• Organization of epidemiological and medical data	• Bulletins, daily reports, underreporting	• Digital transformation of health, online platforms, dashboards, modeling and mapping of needs, excess mortality methodology

(Continued)

CHALLENGES	ACTIONS TAKEN BY MOH	PAHO RESPONSE AND RECOMMENDATIONS
• Cold chain requirements • Vaccination: production, certification by WHO, availability and effectiveness, uncertainty (vaccine hesitancy access, equity prioritization)	• COVAX initiative vs. bilateral negotiations • Delays in provision • Vaccination by priority groups • Exclusivity contracts, restrictions in donations, pricing of vaccines	• Vaccine procurement (22.5 million vaccine doses from COVAX), 49 countries with vaccine distribution • Provide information online on security and effectiveness of vaccines in the pipeline • Revolving Fund availability to support supply of vaccines and medicines
• Access to market economies • Storage capacity and excessive demand	• Provision of PPE, medical equipment, and other supplies	• Warehouse capacity, Panama hub • Provision of list of suppliers that could assist access to equipment and supplies
• Neglected infectious diseases, noncommunicable diseases (NCDs), regular immunization programs, and mental health	• Strengthening of health systems	• Measures taken to cover the existing gap: mobile clinics, community-based care outpatient services, primary care services, telemedicine, expansion of facility hours, integration of services into single visit, campaigns for missed appointments
• Nationalism vs. solidarity	• Competition vs. synergies	• PAHO has promoted Pan Americanism, two initiatives in LAC: 1) Transfer of RNA technology, and 2) local production of PPE • Vaccine production

5.3. Efficiency

COVID-19 planning and monitoring frameworks

Annex Table 36 presents the planning and monitoring frameworks of COVID-19 response.

Annex Table 36. COVID-19 planning and monitoring frameworks

YEAR	WHO COVID-19 SPRP (AT LEAST 3 VERSIONS FROM 2020 TO 2022)	PAHO REGIONAL RESPONSE PLAN AND DONOR APPEAL (AT LEAST 5 VERSIONS DURING 2020 AND 2022)	PAHO STRATEGIC PLAN 2020–2025
2020 **2021**	WHO SPRP purpose: outline the public health measures that need to be taken to support countries to prepare for and respond to COVID-19	PAHO SPRP overall goal: support Member States in the Region of the Americas in preparing for and responding to COVID-19 outbreaks	PAHO Strategic Plan 2020–2025 sets out the health impact and outcome results that PAHO and its Member States commit to collectively achieve by the end of 2025

(Continued)

YEAR	WHO COVID-19 SPRP (AT LEAST 3 VERSIONS FROM 2020 TO 2022)	PAHO REGIONAL RESPONSE PLAN AND DONOR APPEAL (AT LEAST 5 VERSIONS DURING 2020 AND 2022)	PAHO STRATEGIC PLAN 2020–2025
	10 Pillars (added Pillar 10 in 2021 for COVID-19 vaccination) Key performance indicators: 15 (2020 version), and 38 (2021 version). The key performance indicators were intended to monitor the implementation of the COVID-19 SPRP at country level	Specific objectives: 1. Save lives and protect those individuals and populations facing the severest vulnerabilities, including healthcare workers 2. Limit human-to-human transmission, including reducing secondary infections among close contacts, to slow down the spread of the disease 10 Pillars (added Pillar 10 in 2021 for COVID-19 vaccination) Indicators were not identified in the 2020 and 2021 plan, since the indicators proposed by WHO were common to all regions	Strategic Plan 2020–2025 defines impact indicators (100) and outcome indicators (100) to which the work of the Member States and PASB will contribute. The indicators are defined to monitor health progress at country level Outcome 25 – Health emergencies detection and response included two indicators: • Percentage of acute public health events for which a risk assessment is completed within 72 hours • Percentage of countries and territories providing an essential package of life-saving health services in all graded emergencies
2022	Strategic preparedness, readiness, and response plan to end the global COVID-19 emergency in 2022 Collective goal: end the global public health emergency of COVID-19 in 2022	Response Strategy and Donor Appeal Apr 2022 – Mar 2023 Overall goal: end the global public health emergency of COVID-19 in 2022 in the Region	

(Continued)

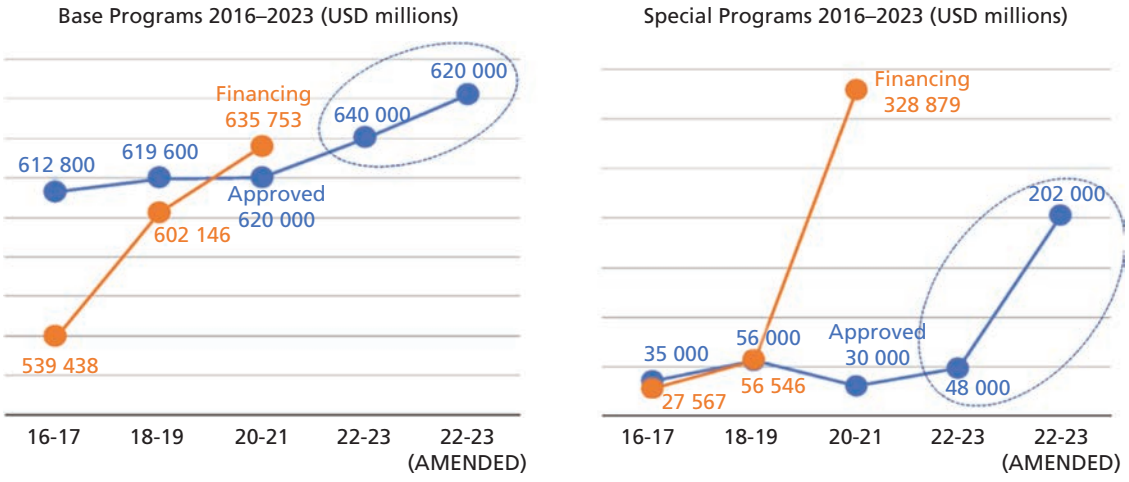
YEAR	WHO COVID-19 SPRP (AT LEAST 3 VERSIONS FROM 2020 TO 2022)	PAHO REGIONAL RESPONSE PLAN AND DONOR APPEAL (AT LEAST 5 VERSIONS DURING 2020 AND 2022)	PAHO STRATEGIC PLAN 2020–2025
	Strategic objectives: 1. Reduce and control the incidence of SARS-CoV-2 infections. This is essential to protect individuals, and especially vulnerable individuals at risk of severe disease or occupational exposures to the virus, from exposure, reduce the probability that future variants will arise, and reduce pressure on health systems 2. Prevent, diagnose, and treat COVID-19 to reduce mortality, morbidity, and long-term sequelae Defines planning scenarios and an integrated plan to end the pandemic, encompassing five interacting subsystems of preparedness, readiness, and response. Indicators have not been identified in the 2022 plan.	Strategic objectives: 1. Reduce and control the incidence of SARS-CoV-2 infections to protect individuals, and especially vulnerable individuals at risk of severe disease or occupational exposures to the virus, from exposure, reduce the probability that future variants will arise, and reduce pressure on health systems 2. Prevent, diagnose, and treat COVID-19 to reduce mortality, morbidity, and long-term sequelae Defines planning scenarios and an integrated plan to end the pandemic (priority actions). Indicators have not been identified in the 2022 plan.	

Overview of COVID-19 funding and impact on Base Programs and Special Programs

PAHO's Program Budget for the Strategic Plan 2020–2025 is subdivided into Base Programs and Special Programs. The Base Programs are structured around 28 outcomes, within which there are three outcomes (23, 24, and 25) related to public health emergency preparedness and response. In particular, Outcome 25 (Health emergencies detection and response) concentrated the majority of pandemic response funds budgeted within the Base Programs (although not solely). Special Programs included the Outbreak and Crisis Response program, which has directed the majority of budgeted funds to the COVID-19 response.

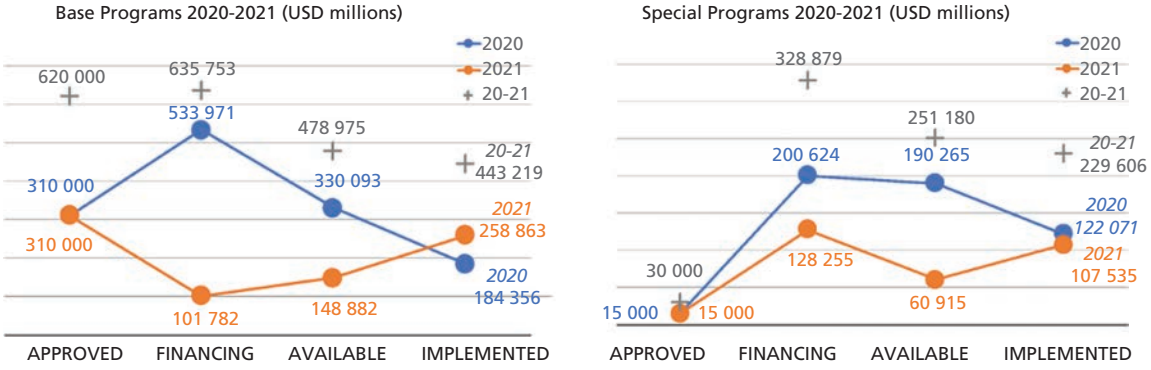
PAHO has a biennial budget. The Program Budget for 2022–2023 was approved by Member States in September 2021. Given that WHO's budget changed in early 2022, PAHO needed to amend its budget to incorporate the new figures in both Base and Special Programs *(105)*, as shown in Annex Figure 22 and Annex Figure 23.

Annex Figure 22. Program Budget: approved and financing, Base Programs, and Special Programs, 2016–2023



Source: Pan American Health Organization. Preliminary report of the end-of-biennium assessment of the PAHO Program Budget 2020-2021/First interim report on the implementation of the PAHO Strategic Plan 2020-2025 [CE170/13]. 170th Executive Committee; 20-24 June 2022. Washington, D.C.: PAHO; 2022. Available from: https://www.paho.org/sites/default/files/ce170-13-e-report-end-biennium_0.pdf.

Annex Figure 23. Comparison of Base Programs and Special Programs budgets, 2020–2021



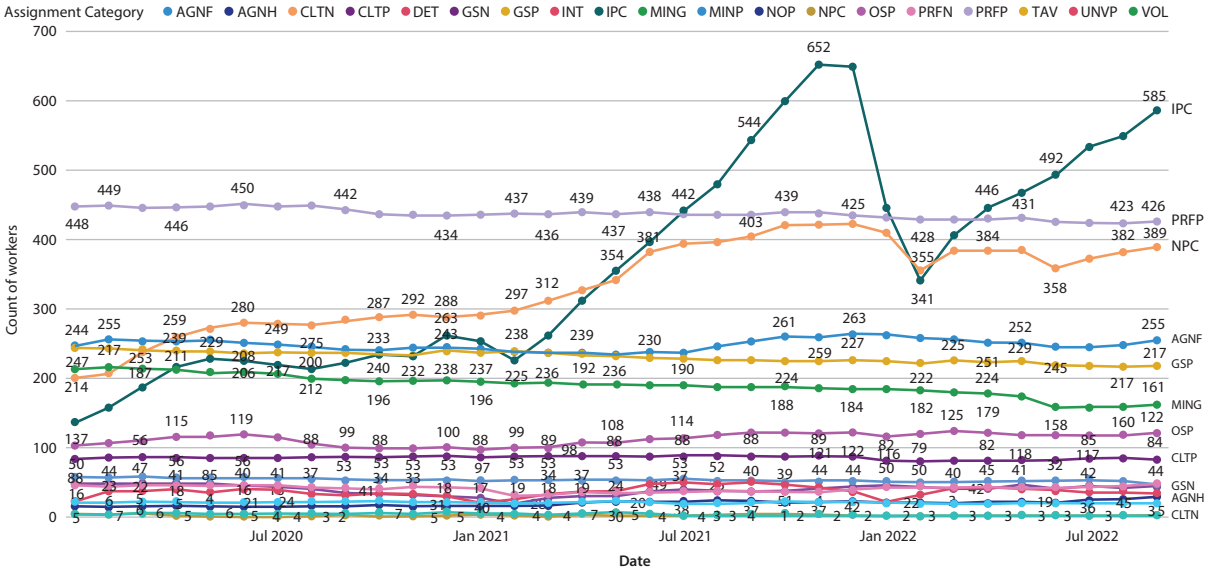
Source: Financial report of the Director and report of the external auditor 2020 and 2021.

In 2020, the funds implemented for both Base Programs and Special Programs were significantly below the funds available, at 56% and 64%, respectively. In 2021, the level of implementation of funds was 174% in Base Programs and 177% in Special Programs, as shown in Annex Figure 23. It is important to consider that voluntary contributions (both PAHO Voluntary Contributions and Emergency Funds) are received during the biennium, so an important amount is carried over to the following biennium. In fact, USD 97 million was carried over in PAHO Voluntary Contributions, and USD 78 million in PAHO Emergency Funds.

Count of PAHO workers 2020–2022

Annex Figure 24 presents the count of PAHO workers by date and assignment category.

Annex Figure 24. Count of PAHO workers by date and assignment category



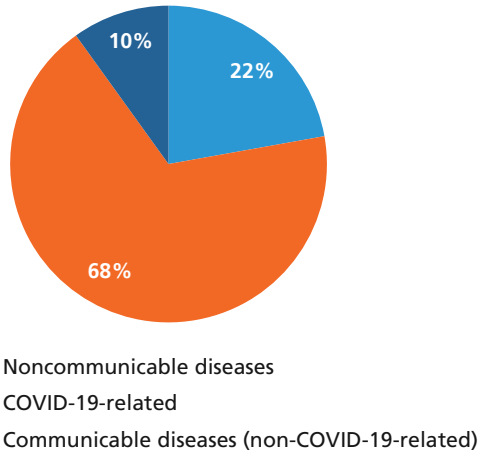
Source: Pan American Health Organization, Department of Human Resources Management.

Overview of Canada and United States funding to PAHO (2013–2023)

Canada to PAHO

When reflecting on the chart in Annex Figure 25, Distribution of Canada grants to PAHO, 2015–2023, it is easy to understand which health-related causes received the most funds from Canada to PAHO. Although the COVID-19 pandemic was declared only in 2020, it soon became 67.9% (CAD 102.5 million) of Canada's grant amount. After declaration of the pandemic, Canada swiftly put COVID-19-related grants into place starting on 29 May 2020. Although the Improved Health of Women and Adolescent Girls in Situations of Vulnerability grant for CAD 15 million (effective 5 March 2021 – 30 June 2024; extension 11 February 2022 – 30 June 2025) was created during the pandemic, the main focus of Canada's grants to PAHO remained COVID-19-related.

Annex Figure 25. Distribution of Canada grants to PAHO, 2015–2023



Source: Department of Foreign Affairs, Trade and Development (Canada).

Before the declaration of the COVID-19 pandemic, Canada's grant focus had been on NCDs. The total amount from 2015–2023 in grants toward NCDs is CAD 15 million. Through the midst of COVID-19 grants, the Integrated Health Systems in Latin America and the Caribbean/Systèmes de santé intégrés en Amérique latine et dan les Caraïbes grant was extended from the original expiry (31 December 2019) to a new expiry (30 June 2020).

The United States to PAHO

Based on the data collected, the type of international sector of foreign assistance from the United States to PAHO became homogeneous in 2020. All funds from the United States to PAHO in 2020 were based on Basic Health, focusing on the U.S. Government sector Pandemic, Influenza, and Other Emerging Threats (PIOET). PIOET is part of the Health: PAHO Umbrella Grant 2016–2021. In 2020, only five activities were created, all under PIOET: an activity to the Caribbean Region (current amount: USD 1.1 million), Haiti (current amount: USD 700 000), Jamaica (current amount: USD 700 000), Paraguay (current amount: USD 700 000), and the Dominican Republic (current amount: USD 700 000). Although 2020 was the year the pandemic was declared, the number of foreign assistance activities and the "current amount" of foreign assistance in 2020 was low (USD 3.9 million for the five activities). 2020 was the final full year of the Trump Administration. During the Trump Administration (20 January 2017 – 20 January 2021), the "current amount" ranged from USD 3.9 million (2020) to USD 14 764 749 (2017).

In 2021, the Biden Administration officially started. This start brought the highest "current amount" per year from 2013–2022 at USD 42 368 166. Basic health still had the highest "current amount" in 2021 (USD 34 463 275); however, other intersectional sectors were also being funded again.

Another trend has been the cessation of the "current amount" of foreign assistance from the Department of Health and Human Services to PAHO. The "current amount" from the Department of Health and Human Services was USD 0 from 2019 to 2022.

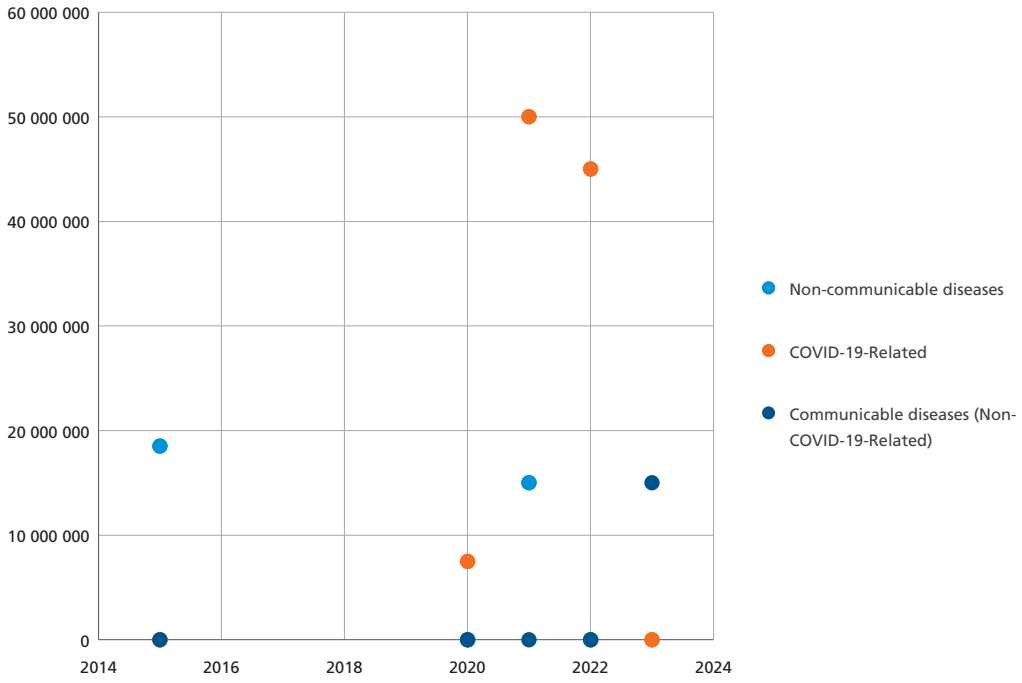
From 2013–2022, the U.S. Agency for International Development (USAID) held the highest "current amount" of foreign assistance for any funding agency at USD 63 402 329. As for the "current amount" in the Intersectional Sector, Basic Health remains the highest in terms of United States dollars from each of the funding agencies.

Canada and the United States

When comparing Canada and the United States, it is clear that both countries increased their budgets in 2020 for pandemic response. Funding by both drastically impacted the theme of the funding and the amount of funding. Although the COVID-19 pandemic continues, both nations have started motions to fund pandemic-related causes again (Annex Figures 25–28).

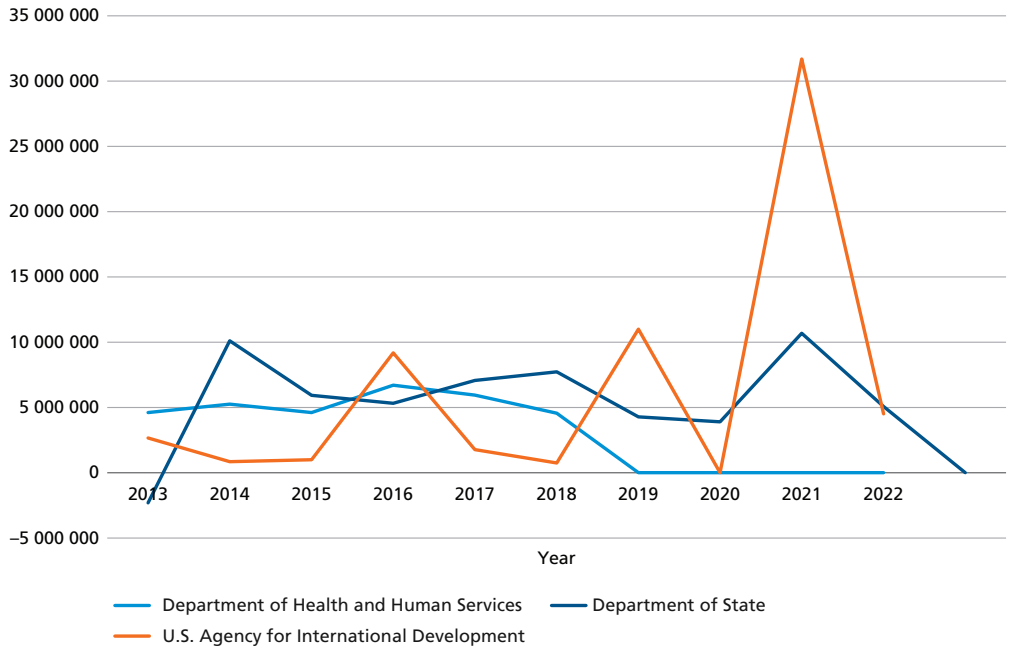
This analysis of funds given to PAHO from both the United States and Canada used information from the physical Canadian grants (with verification from the Canadian Government website and PAHO) and the Foreign Assistance website for the United States funds. It was imperative to compare the theme of each grant/monetary assistance by year to analyze any funding patterns related to the COVID-19 pandemic.

Annex Figure 26. Start dates of Canada grants to PAHO before amendments



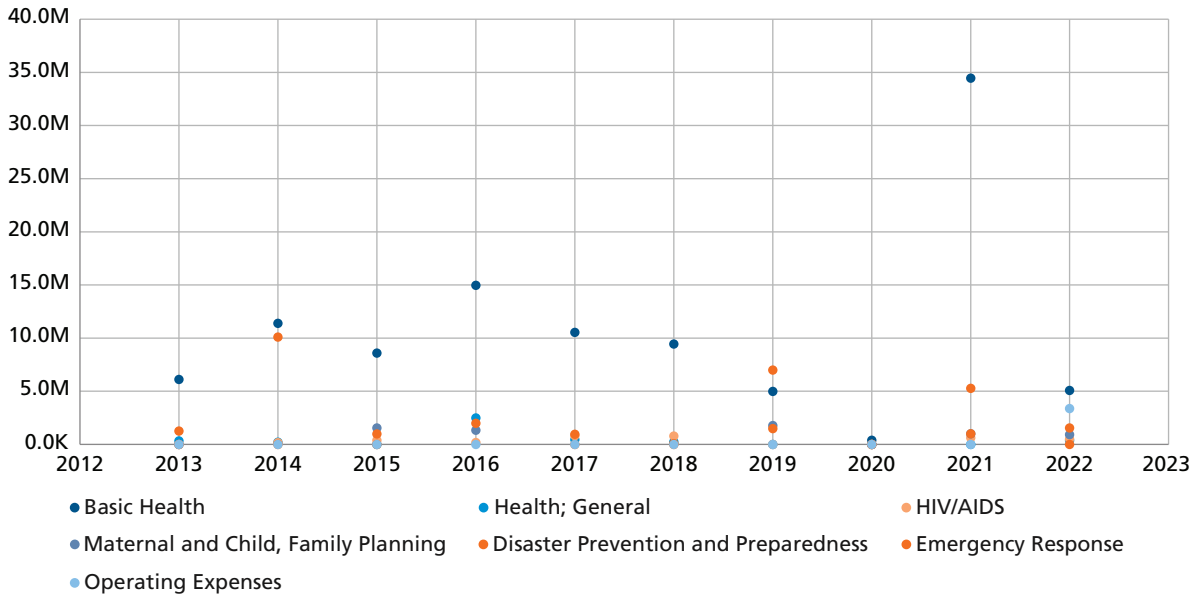
Source: Data for figure from: ForeignAssistance.gov (https://www.foreignassistance.gov) (USA) and Department of Foreign Affairs, Trade and Development (Canada).

Annex Figure 27. United States "current amount" of foreign assistance to PAHO, 2013–2022, by funding agency



Source: ForeignAssistance.gov. Available from: https://www.foreignassistance.gov.

Annex Figure 28. Current amount of United States funds to PAHO by year, 2013–2022



Source: ForeignAssistance.gov. Available from: https://www.foreignassistance.gov.

5.4. Added value

Countries with COVID-19 risk mitigation measures during national elections and referendums

Annex Table 37. COVID-19 risk mitigation measures during national elections, referendum, by country and territory

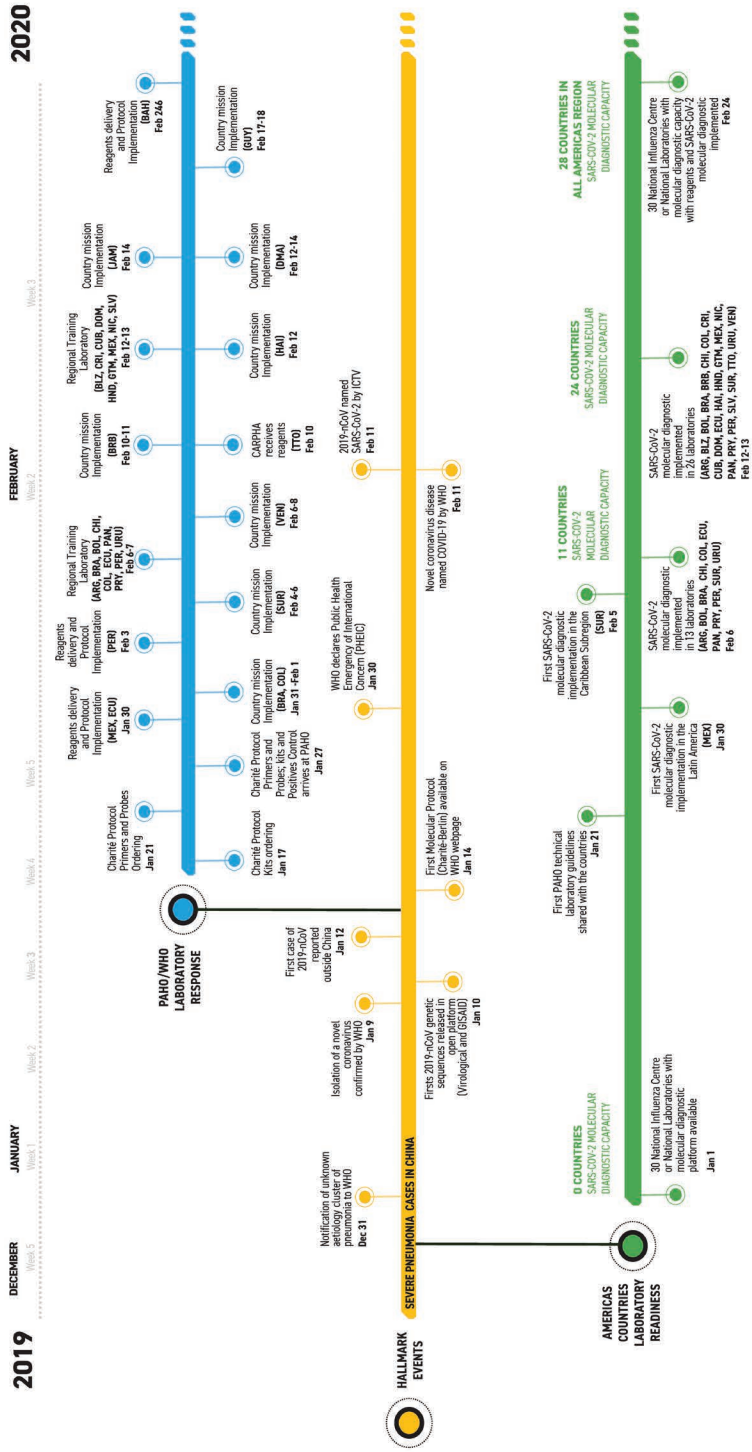
COUNTRY/ TERRITORY	ELECTION/DATE	INITIALLY POSTPONED DUE TO COVID-19	POLITICAL RALLIES OR EVENTS BANNED	LIMIT ON THE NUMBER OF PARTICIPANTS AT PUBLIC GATHERINGS	HEALTH AND SAFETY MEASURES IN PLACE
Belize	General elections / 11 November 2020				●
Bermuda	General elections / 1 October 2020				●
Bolivia (Plurinational State of)	Presidential elections / 18 October 2020	●			●
Cayman Islands	General elections / 14 April 2021			●	●
Chile	Constitutional convention election / 15–16 May 2021	●			●
Curaçao	Parliamentary elections / 19 March 2021		●		●

(Continued)

COUNTRY/ TERRITORY	ELECTION/DATE	INITIALLY POSTPONED DUE TO COVID-19	POLITICAL RALLIES OR EVENTS BANNED	LIMIT ON THE NUMBER OF PARTICIPANTS AT PUBLIC GATHERINGS	HEALTH AND SAFETY MEASURES IN PLACE
Dominican Republic	Presidential and legislative elections / 5 July 2020	●	●		●
Ecuador	Presidential elections / 7 February 2021		●	●	●
El Salvador	Legislative and municipal elections / 28 February 2021				●
Jamaica	General elections / 3 September 2020		●	●	●
Mexico	Legislative and local elections / 6 June 2021				●
Peru	General elections / 11 April 2021				●
Saint Kitts and Nevis	General elections / 5 June 2020			●	●
Saint Lucia	General elections / 26 July 2020				●
Saint Vincent and the Grenadines	General elections / 5 November 2020				●
Suriname	General elections / 25 May 2020				●
Trinidad and Tobago	General elections / 10 August 2020				●
Trinidad and Tobago	House of Assembly elections / 25 January 2021			●	●
Turks and Caicos Islands	General elections / 19 February 2021			●	●
Venezuela (Bolivarian Republic of)	Parliamentary elections / 6 December 2020				●

Source: International Institute for Democracy and Electoral Assistance. Global overview of COVID-19: impact on elections. Stockholm: IDEA; 2021. Available from: https://www.idea.int/news-media/multimedia-reports/global-overview-covid-19-impact-elections.

Annex Figure 29. Timeline of laboratory preparedness and response in the Region of the Americas to the COVID-19 outbreak, 31 December 2019 to 24 February 2020



Source: Leite JA, Gresh L, Vicari A, Gabastou JM, Perez E, Aldighieri S, et al. COVID-19 laboratory preparedness and response in the Americas Region: lessons learned. Simuunza MC, editor. PLoS One. 2021;16(6):e0253334. Available from: https://dx.plos.org/10.1371/journal.pone.0253334.

5.5. Lessons learned

Patterns and trends observed in Member State responses, and Member State lessons learned in policies and practices

The following lessons learned were identified from analyzing the policies and practices applied by Member States.

1. Timely, combined, and sustained implementation of nonpharmaceutical interventions (NPIs) increased their effectiveness.
2. Extending social support and protection contributed to mitigating the economic recession caused by the NPIs.
3. Inadequate and inefficient risk communication led to infodemic (false or misleading information) and less adherence to mitigation measures, including vaccination.

Lesson 1: Timely, combined, and sustained implementation of NPIs increased their effectiveness.
Member States applied NPIs to mitigate the spread of COVID-19, which included entry requirements; face mask policies; physical distance requirements; stay-at-home requirements; school, workplace, and transport closures; and a ban on public mass gatherings. The rapid and sustained implementation of the measures correlated with lower COVID-19 spread. In addition, most of the countries applied different NPIs concurrently, which increased the impact of these mitigation measures. These interventions provided the only protection against COVID-19 and were useful in preventing deaths at a time when vaccines were not yet available.

Lesson 2: Extending social support and protection contributed to mitigating the negative economic impact caused by some NPIs.
Stay-at-home requirements and other NPIs caused a severe economic downturn, which particularly affected low-paid and informal workers. In this scenario, many workers were forced to violate lockdown on a daily basis to survive. In the Region, 38% of total workers (and 61% of vulnerable informal workers) did not have access to any kind of social protection and so were at greater risk of falling into poverty. Across the Region, governments established social security programs to protect vulnerable groups and/or expanded social programs to support working and unemployed groups in different ways. Governments that committed significant resources to new or expanded social assistance programs were able to reduce the poverty increase caused by the lockdown policies considerably.

Lesson 3: Inadequate and inefficient risk communication led to infodemic and less adherence to mitigation measures, including vaccination.
During the COVID-19 pandemic, risk communication campaigns across the Region were very diverse and often inefficient due to the lack of trust in political leaders, politicization of the response, the complex nature of the information, and the lack of an inclusive approach adopted during communication campaigns. Risk communication products lacked awareness of diversity and gender differences, and often had inaccurate information and were not evidence-based. Only a limited number of countries provided information to prevent an infodemic. The actions of political leaders, together with contradictory information and misinformation in the mass media, caused confusion and inaccurate risk perception among the public *(122)*.

This affected adherence to social mitigation measures, as risk perception correlates positively and significantly with preventive health behavior. Vaccination hesitancy spread during the pandemic, in part due to lack of appropriate risk communication. Understanding the relevance of clear, timely, and accessible risk communication and public risk perception might facilitate the implementation of control measures and vaccination.

Annex 6.
Survey results

6.1. Identification questions

The survey was sent to 2290 PAHO personnel and had a total of 27 respondents from Kobo and 945 from Gallup, a total of 972 (349 males and 623 females). Of those, 868 were eligible to respond to the surveys, as they had worked for the Organization in 2020 and/or 2021.

- Male respondents: 312 (36%). Of those, 42% were from headquarters and 39% were from country offices;
- Female respondents: 556 (64%). Of those, 36% were from headquarters and 51% were from country offices.

6.2. PAHO's performance in the COVID-19 pandemic response

Overall, respondents approved of PAHO's performance during the three pandemic phases – the start of COVID-19, the various pandemic waves, and the vaccination phase – with 70%, 81%, and 77% of participants, respectively, reporting that PAHO did well or very well. According to 80% of the respondents, PAHO was able to achieve well or very well its intended results.

In the open question, 54% (13 respondents) mentioned that PAHO encountered difficulties with the COVAX mechanism and vaccination during the emergency phase. In addition, 33% (8) cited difficulties in information communication, mainly in the areas of delayed communication and standardized communication between PAHO and countries.

Although the overall perception is high, when looking at the support for Member States, 51% (446) of participants considered that PAHO's emergency response to COVID-19 was highly aligned with national response plans. In comparison, 38% (329) stated that PAHO was somewhat aligned. Also, 67% (585) indicated that PAHO supported the Member States in defining needs and priorities generated by the COVID-19 pandemic during the whole pandemic (from Mar 2020 to the present).

The COVID-19 national response plans were completed and shared with PAHO during the whole pandemic, according to 40% (696) who responded that PAHO provided technical support to help define needs and priorities in the COVID-19 national response plans. During the pandemic, the Member States adopted PAHO's recommendations about COVID-19 response (via technical support) very well or well, according to 54% (475). This is consistent with the positive views regarding "technical cooperation" as a relevant PAHO cooperation modality.

According to 46% (391), PAHO provided material and/or technical support that was not included in the COVID-19 national response plan, and 91% (355) of those stated that the material and/or technical support

was helpful in implementing the COVID-19 national response plan. Related to education and training, 44% (379) said that they received education and training from PAHO on implementing the national COVID-19 response plan; 30% (258) did not receive education and training, while 27% (231) did not know how to answer the question.

Regarding equity, 77% (651) stated that PAHO advocated for addressing health equity in the COVID-19 national response very frequently or frequently, but only 29% (250) said that PAHO's advocating was fully successful, while 46% (401) stated that it was partially successful.

From the open question, some of the examples provided by the respondents on how PAHO promotes health equity were vaccines for vulnerable groups (e.g., immigrants, Indigenous people, older persons, children, pregnant women) and access to testing.

PAHO coordinated its response to ensure a timely and cost-effective response and avoid duplication (with the Member States and other partners: United Nations, donors, NGOs, and CSOs) very well or well, according to 64% (547) of respondents.

From the open question, 67% (16) mentioned that PAHO plays a leading role and avoids duplication in coordinating work with Member States and other partners: United Nations, donors, NGOs, and CSOs; and 17% (4) mentioned that PAHO plays a leading role in coordinating its response, playing a guiding role.

According to respondents, the two PAHO pillars that have the highest potential to strengthen health systems over time and beyond the COVID-19 pandemic are "Vaccination" (79%, 683) and "Operational support and logistics, and supply chains" (76%, 655). The pillar with the lowest potential to strengthen health systems over time is "Points of entry, international travel and transport, and mass gatherings" (61%, 527).

Regarding the level of PAHO assistance on cooperation modalities, 40% of respondents stated that PAHO had a good level of assistance in all areas of cooperation, but there is a clear difference in technical assistance (56%, 484), resource mobilization (46%, 398), and logistics and supply chains (46%, 396) compared to other modalities. Seventeen percent of respondents did not know how to answer this question.

From the open question, respondents provided examples of where PAHO was excellent in providing technical support in strengthening laboratory capacity to the Member States, and in the areas of capacity-building (training of personnel in diagnostic tests and procurement of diagnostic tools and reagents). Moreover, 42% (10) mentioned national surveillance, laboratory testing, and PAHO support for pandemic preparedness operations, and that responses had been effective during previous outbreaks and the COVID-19 response.

PAHO's contribution to achieving equitable, resilient, and sustainable health systems was rated slightly lower overall – only 24% (200) stated that PAHO provided a high level of assistance in these areas. Although the data are not representative, they indicate the difficulty of reconciling a massive response to a large-scale public health emergency with the implementation of institutional mechanisms that, during a crisis, ensure a medium-term perspective on capacity-building.

The open question shows that respondents think PAHO has made unique contributions during the response to the COVID-19 pandemic in the areas of technical cooperation, capacity-building in laboratory and diagnostic tests, technical expertise and advice, procurement of medical supplies and PPE, and risk communication.

From the open question, respondents believe that testing (13%, 3), volunteer vaccine teams (13%, 3), cross-sectoral efforts (17%, 4), and emergency response (17%, 4) are essential to address viruses and epidemics effectively, and they recommend maintaining these policies or practices for future public health emergencies.

From the open question, 21% (5) and 13% (3) felt that inadequate staffing, personnel welfare, and equipment made the COVID-19 response more difficult to deal with and recommended review/nonuse in future public health emergencies.

From the open question, regarding the PAHO COVID-19 response, 13% (3) recommended that regional and subregional job responsibilities needed to be more clearly defined to facilitate entity support to country offices, and 13% (3) indicated that teleworking resulted in longer working hours and blurred boundaries between life and work.

6.3. Health and well-being of PAHO personnel

The pandemic affected the work–life balance of 90% of survey respondents (782 respondents) either positively (37%) or negatively (51%), but women were slightly more affected negatively than men (53% vs. 48%).

The level of stress experienced by PAHO personnel increased during the pandemic (80%, 698 respondents), with women being slightly more affected than men due to high workload (64%), difficulty balancing professional and personal life (43%), fear of COVID-19 (43%), health concerns (38%), tight deadlines for deliveries/tasks at work (38%), financial crisis (25%), and caring for ill family members (22%).

For PAHO personnel, the most challenging period of their well-being was throughout the first year, according to 41% (360) of respondents. However, females have had more challenges than males (36% vs. 44%).

According to 70% (609) of respondents, PAHO personnel reported that PAHO contributed to protecting their health and well-being.

Regarding access to features/facilities to support PAHO personnel's health and well-being, 51% of respondents stated that PAHO provided some resources, but few had access to them: 19% had access to counseling services and mental health professionals for free; 18% had access to flexible working hours; 15% had access to recognized supports for COVID-19 testing and health care if they were symptomatic, and to vaccines; 10% had access to recognized supports for reconciling life and work; and 4% had access to free time activities to socialize.

To support the work during the pandemic, PAHO provided supplies and equipment for teleworking (e.g., Internet access, computers, screens, keyboards, and mice) (57%), information technology (IT) guidance and support (56%), and ergonomic guidance (35%).

The majority of PAHO personnel responding to the survey (89%, 769 respondents) worked remotely during the pandemic (both fully remote or hybrid model) and reported that teleworking did not negatively impact their work productivity (81%, 620 respondents). Furthermore, teleworking also allowed a better work–life balance in addition to contributing to personal well-being, as reported by 82% (622) of survey respondents.

During the pandemic, PAHO personnel indicated that their physical activity declined, according to 45% (384) of the respondents. To improve their mental health at work, 49% (429) improved their time management skills, 51% (442) set boundaries between personal and professional life, and 40% (348) engaged in learning.

Regarding whether PAHO personnel had ever contracted COVID-19, 53% (459) of respondents stated that they had not, and the majority did not require hospitalization (96%, 428), although 48% (418) stated they had lost a friend or colleague due to COVID-19.

Annex 7.
In-depth country case studies

7.1. Overview of in-depth country case studies on preventive measures implemented in the Americas

The COVID-19 pandemic overwhelmed health systems worldwide and challenged local, national, regional, and global capabilities to prepare in an orderly manner and respond with timely and effective strategies. Since the first cases appeared early in 2020, countries in the Americas faced the same challenges in coping with the emergence of SARS-CoV-2 without diagnostic tests, treatment alternatives, or vaccines at their disposal. The varied success of various national strategies adopted to control viral transmission depended on how well health systems were reorganized, governed, and financed across all levels, but such responses were shaped by the political context in each country. In the countries first affected by SARS-CoV-2 – and with no vaccines available – there was little consensus on the potential impact of lockdowns and border closures, and there were limited disease surveillance interventions such as mass testing, contact-tracing, quarantine of contacts, and isolation of cases.

There was less agreement on the overall impact of preventive nonpharmaceutical public health measures (masking, social distancing, handwashing, canceling mass gatherings, transport limitations, etc.). Nevertheless, countries adopted NPIs at different paces and coverage due to poor availability of PPE, lack of provision of basic medical supplies, or hesitance to impose severe measures that would affect economic and commercial activities. The precautions taken to impose strict measures, such as lockdowns and border closures, when the transmission dynamics of SARS-CoV-2 were not fully understood delayed the implementation of an organized response in the Region of the Americas. What was remarkable, after initial failures, was the fast development of sensitive diagnostic tests, along with the design of new effective vaccines, although mass production, distribution, and access to vaccines later emerged as a key limitation.

The world looked to WHO and its regional offices to deploy a comprehensive strategy that could, if not prevent, then slow down or reduce the initial transmission wave. The long-standing presence of PAHO in the Region has enabled the Organization to have a strong influence by providing specialized technical cooperation, moving human resources, securing medical equipment and supplies, training health personnel, and developing national capabilities in surveillance and information systems, emergency care, and laboratory infrastructure while strengthening health services and public health delivery programs. PAHO emerged as the regional organization that could enable, guide, and lead a fast and effective technical response in the Americas.

However, the pandemic soon proved to be the most challenging crisis in terms of human, technical, and financial resources required, along with the design and implementation of effective preventive and control strategies. Even though PAHO was emerging from a financial crisis that limited budget allocations and hiring

of human resources (among many other restrictions), the pandemic presented additional challenges for which neither PAHO nor countries in the Region were prepared. Previous experiences with different natural disasters and outbreaks such as cholera and the influenza, Zika, and chikungunya viruses had exposed and prepared the Americas to different sanitary emergencies, but their geographical spread, populations at risk, and pressure for the healthcare and surveillance systems were never as severe as for COVID-19.

PAHO performance during the response should always be understood within the contexts where it has been working along with strategic partners and Member States. Under these circumstances, PAHO's overall response to the pandemic highlighted its strengths in certain technical cooperation modalities but also uncovered organizational areas where PAHO's performance had not been consolidated, was undermined, or had lagged behind. It also presented new challenges not previously faced during PAHO's long history that deserve to be critically and constructively addressed going forward.

By mid-2022, the COVID-19 pandemic presented two important stages – before and after the arrival of new vaccines – with several waves of high transmission associated with the emergence of new variants. During the first stage (2020), countries adopted different prevention strategies while vaccines finished phase 3 trials and mass production guaranteed vaccine availability to prioritized groups (first-line health personnel, key workers, and older persons). In the first stage, strategies used included strengthening surveillance systems (e.g., training and provision of high-quality serological and biomolecular diagnostic tools, information systems and dashboards, updated epidemiological data, modeling, contact-tracing, and Go.Data training), where PAHO demonstrated outstanding performance in the whole Region. Once the first vaccines entered the market, the second phase of control, with mass vaccination, was immediately adopted by most countries (Annex Table 38).

7.2. Comparison of impact of COVID-19

The Region of the Americas was one of the regions most affected by COVID-19. As of 25 October 2022, SARS-CoV-2 had infected over 624 million people and caused nearly 6.6 million deaths worldwide *(54)*. Of these, 28.7% of infected cases (179 348 497 people) and 43.4% of deaths (2 848 030 people) occurred in the Americas *(54)*. Among the case study countries, by the end of September 2022, Barbados presented the highest cumulative incidence of confirmed cases per million people (Annex Figure 30).

The cases in Brazil were the highest in the early stages of the pandemic, but by 2022 Barbados had more cumulative cases per million. Brazil showed a steady increase of 161.6 per million cases by late September 2022. Peru had a big increase in incidence by the end of 2021, as did Barbados and the United States, while Guatemala and Mexico showed a steady increase during the period. Haiti experienced a very low number of confirmed cases, contrary to what was expected. Peru had the highest cumulative COVID-19 deaths since the pandemic started, followed by Brazil (Annex Figure 31). The context of each country case study is described in the following section.

Annex Table 38. Overview of selected information about the in-depth country case studies, by 10 October 2022

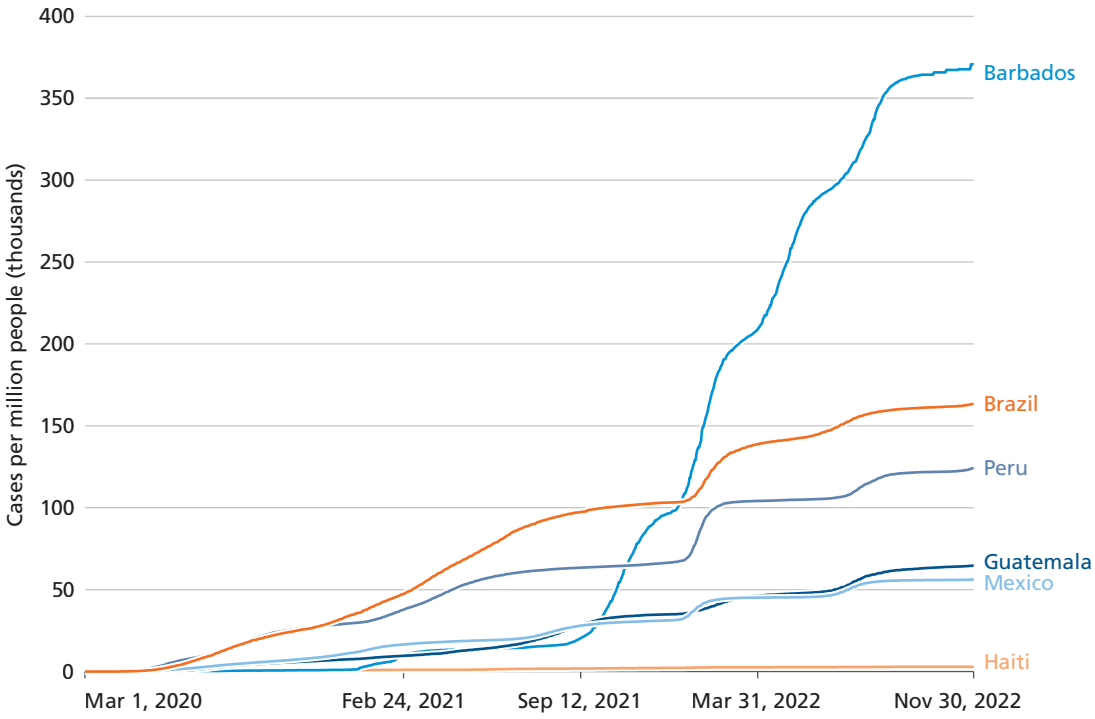
COUNTRY CASE STUDY	REGION	DEMOGRAPHICS				COUNTRY STATUS		
		POPULATION	POP. DENSITY	MEDIAN AGE	LIFE EXP.	HUMAN DEVELOPMENT INDEX	GDP PER CAPITA	HOSPITAL BEDS PER 1000 INHABITANTS
Barbados	Caribbean	281 200	664.463	39.8	79.19	0.814	16 978.07	5.8
Brazil	South America	215 313 504	25.04	33.5	75.88	0.765	14 103.45	2.2
Guatemala	Central America	17 608 483	157.834	22.9	74.3	0.663	7423.808	0.6
Haiti	Caribbean	11 447 569	398.448	24.3	64	0.51	1653.173	0.7
Mexico	North America	127 504 120	66.444	29.3	75.05	0.779	17 336.47	1.38
Peru	South America	33 715 472	25.129	29.1	76.74	0.777	12 236.71	1.6

COVID-19 CASES				COVID-19 VACCINE		
CUM. CASES PER MILLION	CUM. DEATHS PER MILLION	TOTAL TESTS PER 1000	COVID-19 CASE FATALITY RATE	AT LEAST ONE DOSE ADMINISTERED PER 100 PEOPLE	COMPLETED SCHEDULES PER 100 PEOPLE	TOTAL DOSES ADMINISTERED
364 793.7	1991.465	2480.356	0.50%	56.9	53.8	380 898
161 936.5	3204.022	330.912	2.00%	86.3	77.8	484 474 086
64 100.64	1125.821	231.012	1.80%	48.3	37.9	19 725 770
2948.748	74.863	18.047	2.50%	3.1	1.9	470 964
56 001.64	2606.066	122.879	4.70%	74.6	62.8	223 158 993
123 034.3	6427.316	859.283	5.20%	89.6	84.6	84 396 762

Notes: Pop: Population, Exp: expectancy, GPD: gross domestic product, Cum: cumulative.

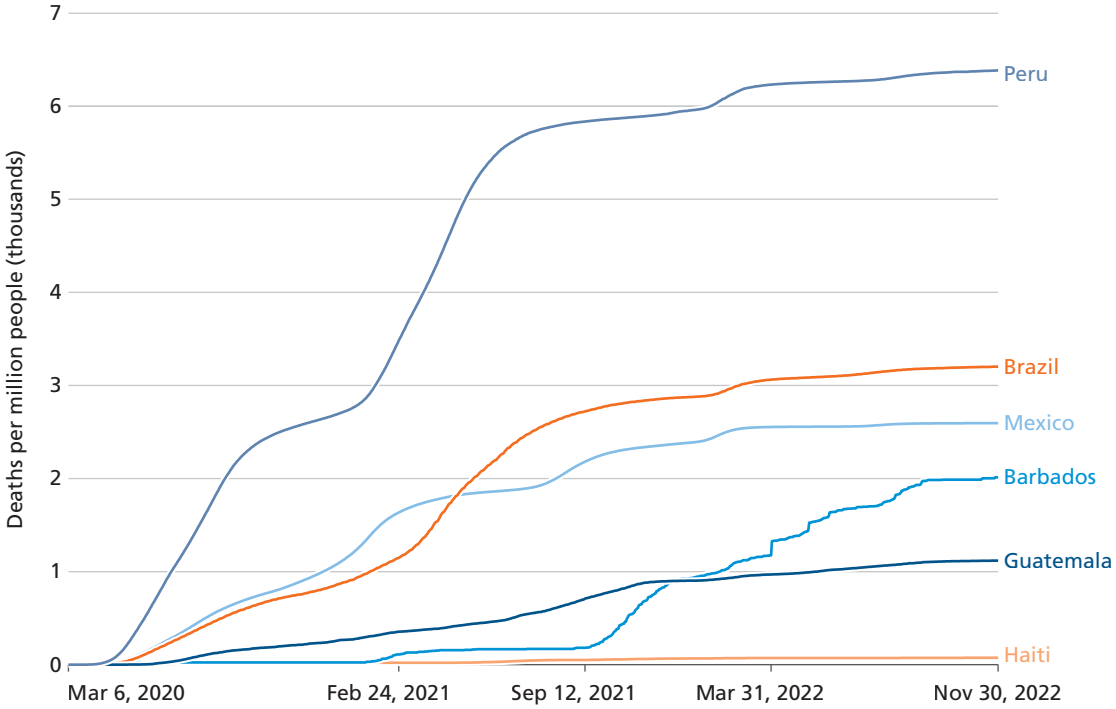
Sources: https://coronavirus.jhu.edu/data/mortality; https://ais.paho.org/imm/IM_DosisAdmin-Vacunacion.asp; https://ourworldindata.org/coronavirus.

Annex Figure 30. Cumulative confirmed COVID-19 cases per million people



Sources: WHO COVID-19 Dashboard. Available from: https://ourworldindata.org/coronavirus.

Annex Figure 31. Cumulative confirmed COVID-19 deaths per million people



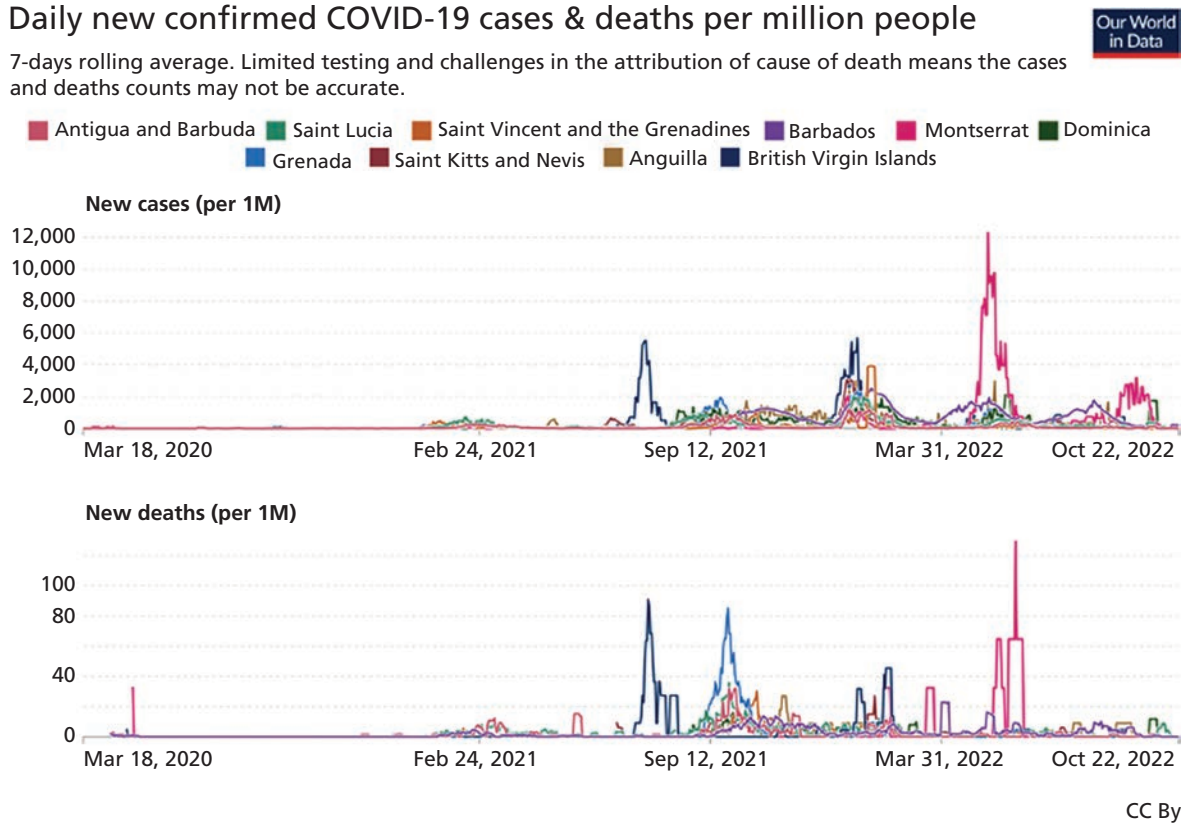
Sources: WHO COVID-19 Dashboard. Available from: https://ourworldindata.org/coronavirus.

Barbados and the Eastern Caribbean Countries

Barbados has hosted the headquarters of the Office for the Eastern Caribbean Countries (ECC) since September 2006. The Office aims to increase PAHO's country presence in the Eastern Caribbean, and its responsibility is to deliver PAHO/WHO technical cooperation in the ECC and Territories and the French Departments in the Americas.[23]

The COVID-19 pandemic impacted Barbados and all the ECC with sporadic or cluster transmission patterns. By October 2022, the subregion had 636.7 confirmed cases per million per day and 3747 cumulative deaths per million (Annex Figure 32). Older persons and persons with underlying health conditions and compromised immune systems were the most vulnerable. Effects on the global economy and subregional sociopolitical situation influenced countries and territories' response to the pandemic and its final impact on the subregion's population.

Annex Figure 32. Daily new confirmed COVID-19 cases and deaths per million people in several Eastern Caribbean Countries and Territories (until 22 October 2022)



Source: Johns Hopkins University. CSSE COVID-19. Our World in Data. Available from: https://ourworldindata.org/.

23 The Eastern Caribbean Countries and Territories and the French Departments in the Americas include Anguilla, Antigua and Barbuda, Barbados, British Virgin Islands, Dominica, French Guiana, Grenada, Guadeloupe, Martinique, Montserrat, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines.

By February 2020, the PAHO office for Barbados and ECC had activated its incident management team (IMT), focused on achieving three objectives: save lives, protect health workers, and stop the spread of the virus. The IMT visited Dominica, Grenada, Saint Kitts and Nevis, and Saint Vincent and the Grenadines to assess the countries' capacities and to provide technical assistance and training. Between 2020 and 2022, risk communication and epidemiological situation analyses and modeling were provided by the ECC office to support the subregional needs, together with the procurement of polymerase chain reaction (PCR) kits, PPE, and medical supplies, strengthening the laboratory network of the ECC subregion. When COVID-19 vaccinations started in 2021, PAHO, through the Barbados ECC subregional office and the COVAX facility, facilitated the provision of vaccines to the countries in the ECC subregion.

The evaluation found that although these achievements in the subregion helped to decrease the impact of the pandemic in the ECC subregion, there were weaknesses in addressing vaccine uptake and vaccine hesitancy, providing technical guidance in case management, and addressing the shortage of supplies and vaccines. In addition, the people in the subregion showed a lack of trust in PAHO/WHO, mainly because they associated PAHO's technical assistance with government measures and did not consider PAHO an independent organization.

COVID-19 vaccine hesitancy and vaccine shortage were the biggest problems in the ECC subregion. Interviewees agreed that PAHO needed better advocacy and executive management to obtain vaccines for small and medium-sized countries effectively and efficiently. In addition, although PAHO supported risk communication in the subregion through its subregional office, it needed to address the public more effectively, considering the unique country contexts in the subregion.

The engagement of subregional stakeholders, including local universities and Caribbean partners, was considered a good measure. According to one interviewee, "Caribbean capacity on partners is fantastic. They do the best they can do with the less they can have." Understanding the subregional context and increasing local engagement is seen as the best strategy to address future emergencies in the ECC subregion.

Barbados as a country

As of 1 December 2022, the Eastern Caribbean island nation of Barbados, with a population of approximately 290 000, had recorded 104 416 confirmed cases of COVID-19, with 567 deaths (COVID-19 mortality of 189 deaths per 100 000). As of 25 November 2022, a total of 380 898 vaccine doses had been administered nationwide *(134)* (Annex Figure 33).

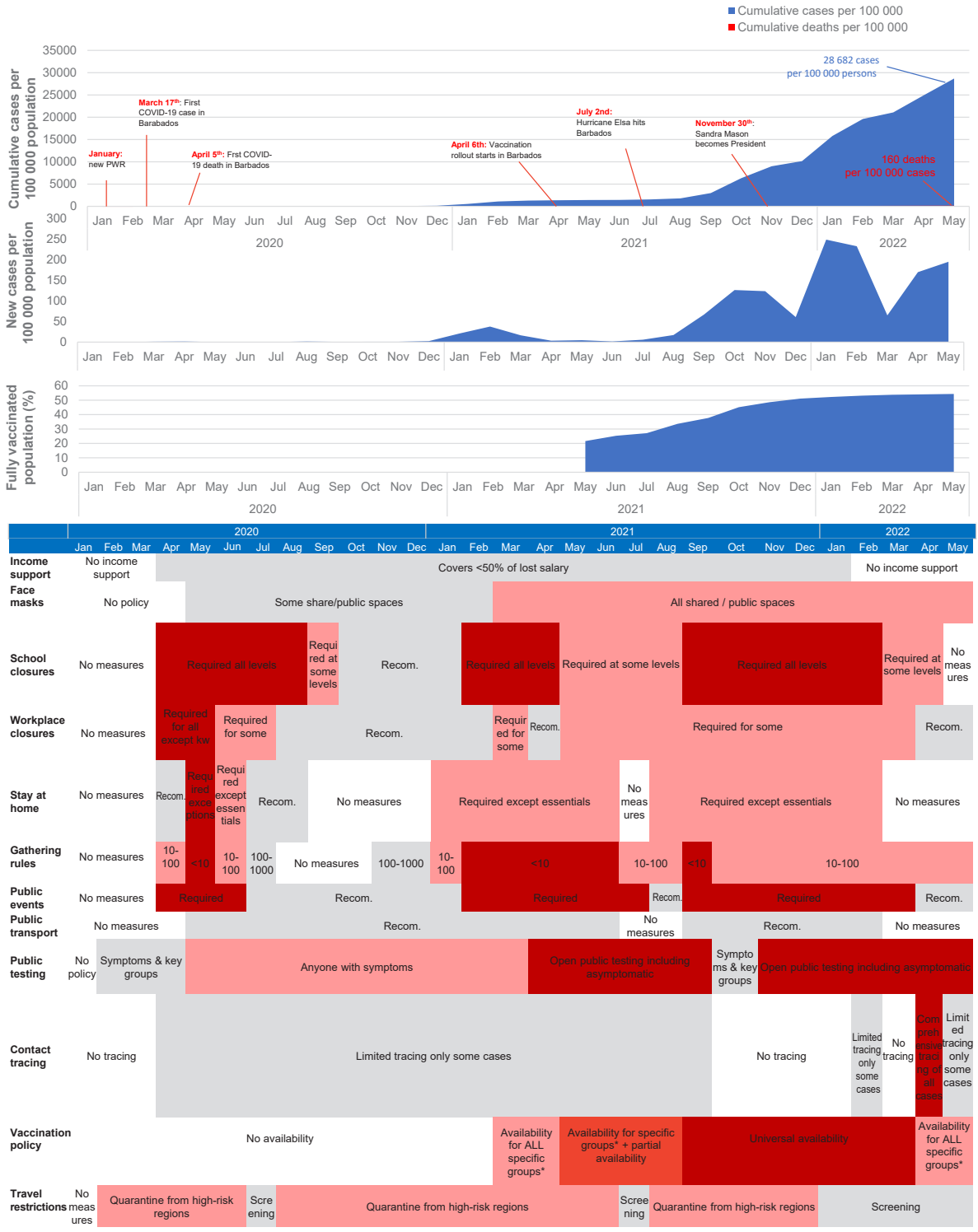
For the pandemic response, Barbados had the advantage of having a well-developed preparedness plan for influenza already in place. PAHO's country office and the MoH identified gaps and made the required adjustments to the influenza plan to develop a COVID-19 plan. By mid-Mar 2020 – several days before the first case was identified – the plan was completed and approved by the Government *(135)*.[24] To address the limited diagnostic capacity, in February 2020 PAHO conducted in-person training in COVID-19 PCR testing for staff and provided test kits, reagents, and other testing supplies to enable the local laboratory to begin COVID-19 testing even before the first case was detected in the country *(135)*.

Barbados is recognized for its leadership in the ECC subregion due to its initial pandemic response. Following the WHO Director-General's request that countries not politicize the pandemic, the Government of Barbados

24 Interview data: PAHO country offices.

Annex Figure 33. COVID-19 epidemiological data and containment measures over time in Barbados

Barbados



Notes: Recom: recommended; kw: key workers; hr: high risk; *key workers / clinically vulnerable groups / older adults.

Sources: Developed by the Evaluation Team for the EPRC based on Our World in Data & WHO Coronavirus (COVID-19) Dashboard.

included opposition leaders, stakeholders, and other social partners in the country's response to COVID-19. PAHO officials, upon request, participated in the discussions during the consultations with stakeholders *(135)*.

Coordination and collaboration with other countries in the Region have been part of the country's response to COVID-19. To mitigate the shortage in human resources within the health sector, a contingent of 100 Cuban doctors and nurses went to Barbados in early April to specifically treat COVID-19 patients, facilitating the local health workers in conducting COVID-19 testing as well as in continuing with other routine services *(135)*. PAHO monitored the provision of essential health services during the COVID-19 emergency, supporting the Government with technical cooperation to maintain essential health services *(135)*.

The evaluation found that the early adaptation of the influenza plans and the preparedness in diagnostic tools allowed the country to contain the impact of the pandemic. Furthermore, the Government implemented risk communication strategies, such as providing clear and frequent information to the public, using social media and public forums to answer questions, and providing access to health information. However, risk communication was still perceived as one of the weaker areas in PAHO's response in the country *(127)*.

PAHO has been particularly weak in addressing the issue of high levels of COVID-19 vaccine hesitancy and low COVID-19 vaccine uptake by the Barbadian population, especially among nurses and public health professionals. In a survey developed by PAHO on vaccine hesitancy among healthcare workers in the Caribbean, including Barbados, at least 31% of the respondents were concerned about vaccine safety, and 20% showed a lack of trust in the vaccine *(136)*. Ultimately, the evaluation found that the Barbadian Government and PAHO implemented several initiatives to reduce vaccine hesitancy and increase public confidence in the vaccine. However, the long-term effectiveness of these initiatives is still to be determined.

Brazil

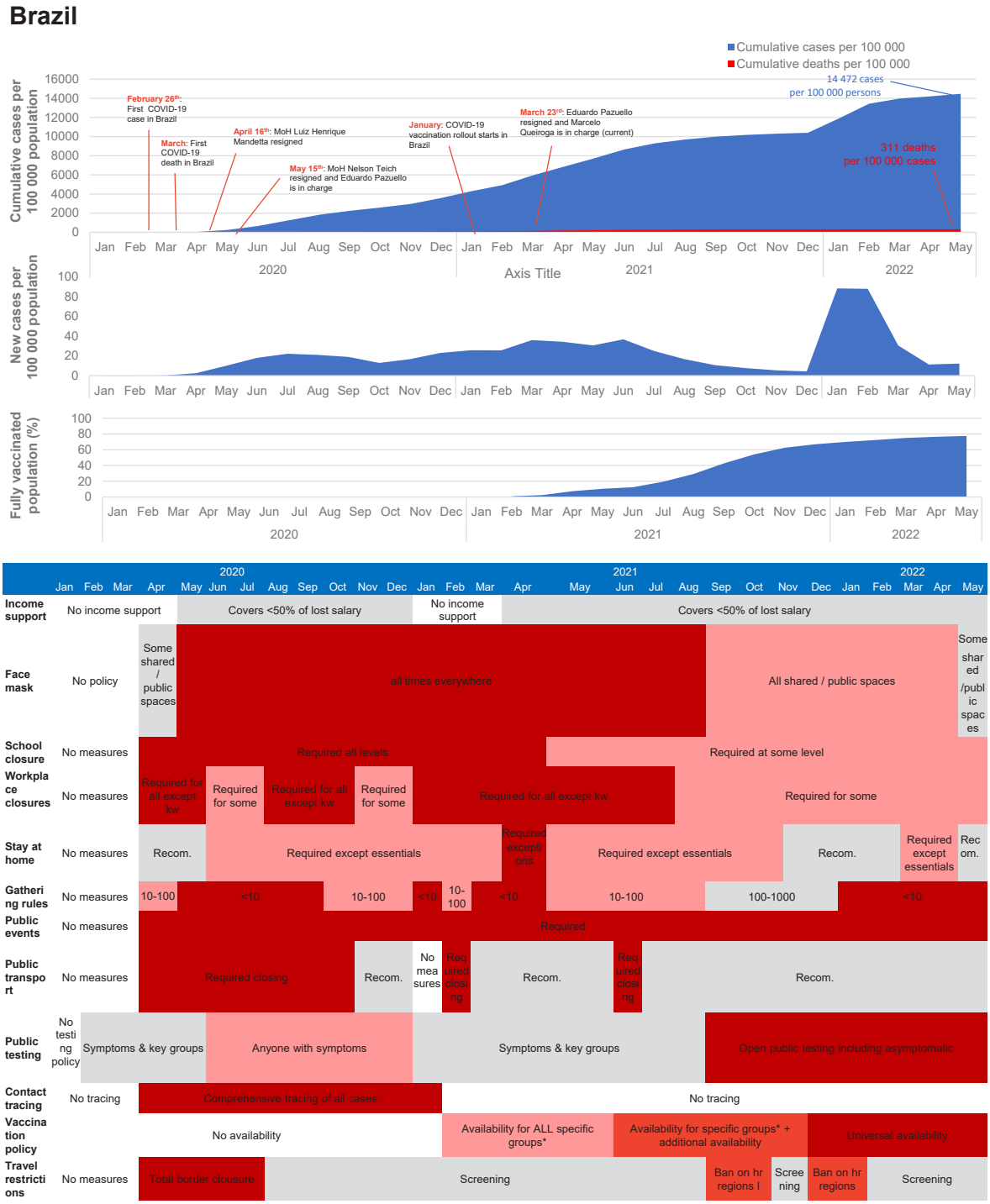
Brazil is a country in Latin America with a population of 214 million that borders Argentina, Bolivia (Plurinational State of), Colombia, French Guiana, Guyana, Paraguay, Peru, Suriname, Uruguay, and Venezuela (Bolivarian Republic of). The Brazilian population has a life expectancy of 75 years and a gross domestic product (GDP) per capita of USD 14 103. Brazil reported the first COVID-19 case for Latin America and the Caribbean (LAC) on 26 February 2020. Since 7 June 2020, Brazil has had the second-highest number of COVID-19 deaths in the world, behind only the United States, and from December 2022 had the fifth-highest number of confirmed cases, just behind the United States, India, France, and Germany *(123)*. From 3 January 2020 to 31 October 2022, Brazil had 161 936 COVID-19 cases per million and 3204 COVID-19 deaths per million. But 77.8% of the population completed the vaccination schedule *(56, 124–126)* (Annex Figure 34).

Although Brazil has one of the most robust health care systems in Latin America, its capacity is very uneven across the country. The spread of the virus in poorer areas with less capacity for medical care, mainly in the North and Northeast regions, threatened the system's ability to respond to the increased demand for services. Brazil reported an increase of 61% in intensive care unit (ICU) capacity (including the private sector) between February 2020 and January 2021: 24 states and the Federal District had occupancy rates for ICUs equal to or greater than 80% in March *(118)*.

The pandemic has gained a strong political connotation in some countries. Additionally, due to disagreements between health ministers and the President over the response, Brazil had four different health ministers during the pandemic.

Within this context, PAHO country office played a key role in supporting the country in response to the crisis. PAHO country office had promptly activated national authorities in January, before WHO declared the novel

Annex Figure 34. COVID-19 epidemiological data and containment measures over time in Brazil



Notes: Recom: recommended; kw: key workers; hr: high risk; *key workers / clinically vulnerable groups / older adults.

Sources: Developed by the Evaluation Team for the EPRC based on Our World in Data & WHO Coronavirus (COVID-19) Dashboard.

coronavirus outbreak as a global pandemic. According to key informant interviews *(127)*, PAHO country office developed a strong epidemiological intelligence system based on its experience of managing outbreaks and epidemics of yellow fever, Zika, and chikungunya, as well as the endemic situation of dengue. PAHO Brazil set up its incident management system (IMS) teams to provide direct emergency response to the MoH and other national and subnational authorities. During the pandemic, PAHO country office increased its personnel and had a robust team with different expertise to support the pandemic response in working with governments.

From the country-level interviews, informants reported that PAHO had an important diplomatic and leadership role in articulating and coordinating the COVID-19 response at all government levels. Despite to political conflicts and disagreements on preventive measures between national and subnational governments, PAHO was able to maintain relationships between the MoH and the state and municipal health secretariats for COVID-19 preparedness and response.

Country counterparts *(127)* recognized and highlighted that PAHO has been key in the response to COVID-19, especially in coordinating with different stakeholders, and given the federal government's lack of coordination and recognition of the severity of the pandemic. According to country office interviewees, PAHO strengthened its relationships and interactions with subnational governments due to this role. With in-place visits and direct support from different levels of government, PAHO gained more credibility and recognition for its work. However, one country-level interviewee and one member of PAHO personnel mentioned that in some cases PAHO acted in a position that should be the role of the Federal Government. Nevertheless, this did not affect PAHO's relationship with the Federal Government.

PAHO was relevant in many ways during the pandemic, but almost all country-level interviewees *(128)* highlighted two moments in which PAHO support had been a key element in the country. The first moment was in relation to the health collapse in Manaus in January 2021. PAHO rapidly deployed a team to Manaus, the capital of the State of Amazonas, to support the COVID-19 response in coordination with municipal, state, and national health authorities from Brazil *(129)*. Some team members were in the field/municipality for more than three months, continually supporting the authorities, having weekly meetings to exchange information, and coordinating response activities daily *(128, 130)*. In addition, PAHO sent oxygen cylinders, oximeters, thermometers, and COVID-19 diagnostic tests to the State of Amazonas and the Municipality of Manaus due to the collapse of the health system *(128, 131, 132)*. According to the country office interviews, the experiences faced in Manaus by PAHO personnel were challenging and physically and mentally exhausting. Although PAHO country office provided excellent technical support in the region, as many country-level interviewees highlighted, the personnel felt overwhelmed and without support from the headquarters.

The second key moment was the dissemination of daily COVID-19 situation analysis reports to the MoH, local health authorities at the federal and state level, and other relevant health sectors, including but not limited to health councils, legislators, and scientific societies. Many interviewees commented that this report was useful and important for making decisions, especially because the Brazilian government took down a website that had shown daily, weekly, and monthly figures on infections and deaths in each of the country's states.

Country-level interviews also highlighted PAHO support on the purchase, donation, and delivery of rapid diagnostic tests, hospital equipment, PPE, swabs, and other laboratory supplies, as well as medical oxygen, oxygen concentrators, pulse oximeters, medicines, and supplies for critical patient care. Also, PAHO contributed to the procedures to purchase supplies from international manufacturers and suppliers and articulated how Brazil could receive donations and delivery.

On vaccines, PAHO country office provided assistance through the PAHO Revolving Fund in preparing to meet the COVAX requirements and providing updates about the market dynamics and financial projections to estimate vaccine investment.

PAHO country office also aided on planned demand for routine immunization programs and procurement of other supplies needed for vaccination; provided support in international bidding and joint bidding with UNICEF, establishing long-term agreements with suppliers to issue price estimates, purchase orders, and requisitions; coordinated and monitored international logistics; advocated for donations to the region; and supported country coordination and preparedness. PAHO country office also contributed to the logistical distribution of vaccines for some municipalities to advance the vaccination of those most in need *(132)*.

PAHO supported and communicated with different stakeholders to implement the COVID-19 response, such as local universities to develop modeling and forecasting during early stages of COVID-19 *(129)*. PAHO coordinated COVID-19 response efforts with other United Nations agencies and international organizations, such as Doctors Without Borders, to support vulnerable populations, including Indigenous, coastal, and isolated communities, especially in the Amazon region. PAHO coordinated the response with civil society through the National Council of Health Secretariats and the National Council of Municipal Health Secretariats, and facilitated the exchange of experiences between Brazil and other countries on COVID-19 response and control activities. It supported Fundação Oswaldo Cruz in the organization and coordination of genomic surveillance networks, laboratory networks, and research networks through the facilitation of meetings and workshops to exchange experiences and identify strengths and opportunities for improvement at the municipal and state levels *(127)*.

On risk communication, PAHO country office produced evidence-based communication materials; disseminated information to different target audiences via social media and other platforms; worked with the media to provide accurate information; and reviewed and exposed false information and unfounded rumors related to COVID-19, using WHO's Epidemic Intelligence from Open Sources.

PAHO country office developed a tool to reduce the risks of the COVID-19 pandemic in the prison system and to improve decisionmaking *(133)*.

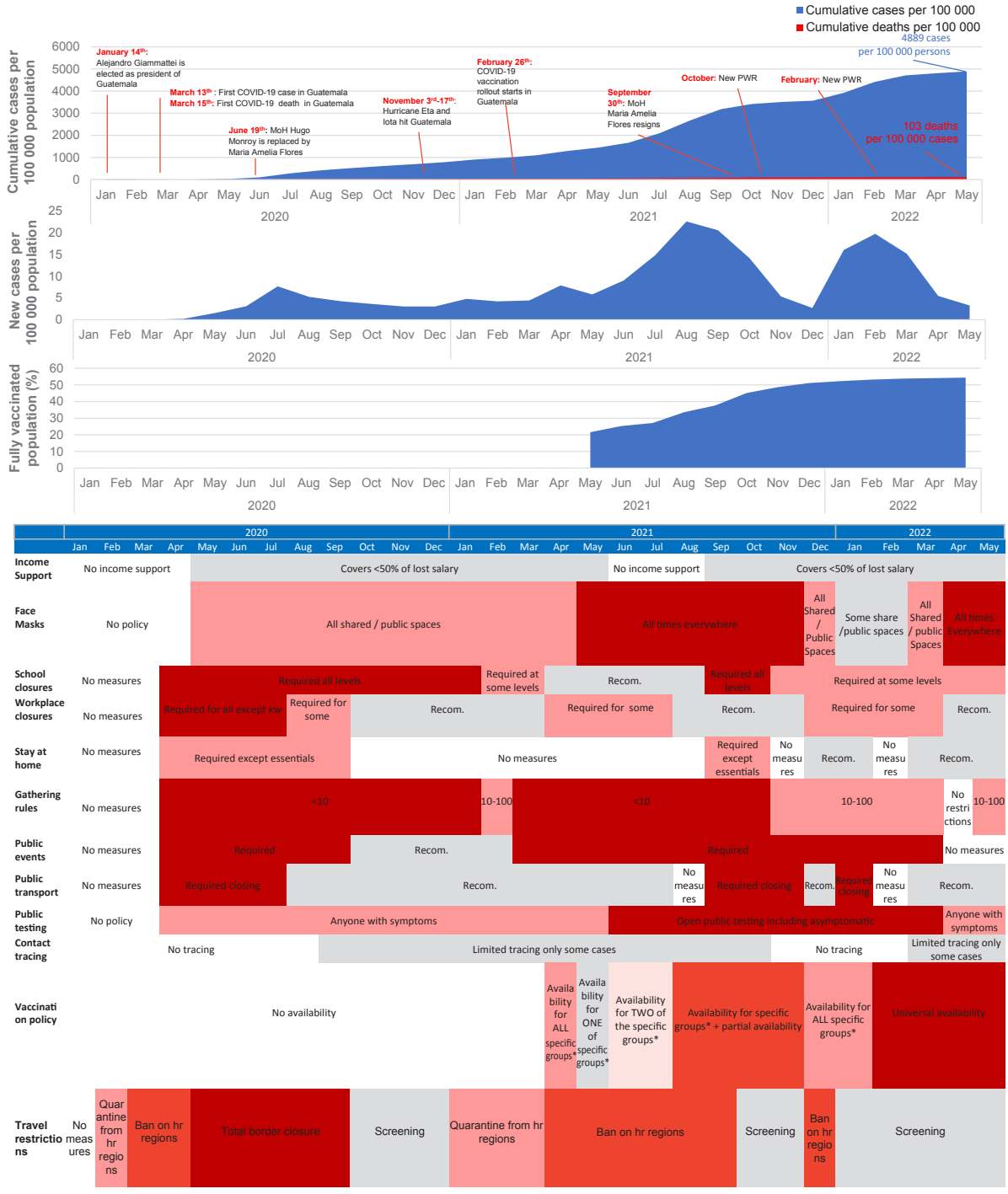
PAHO conducted joint external evaluations to assess COVID-19 response and exchange best practices and lessons learned in 16 states, covering more than 50 municipalities. This facilitated the dissemination of best practices, supported the implementation of a more coordinated response, increased integration between states and municipalities, and strengthened local initiatives. Finally, the team in Brazil published an online repository of scientific material, instructions, and guidance documents in order to provide reliable information on COVID-19 to health professionals.

Guatemala

Guatemala is a country in Central America with 17.5 million inhabitants that borders Belize, El Salvador, Honduras, and Mexico. The Guatemalan population has a life expectancy of 74 years and a GDP per capita of USD 7423. In Guatemala, the first COVID-19 case was confirmed on 13 March 2020, and the first death on 15 March. Throughout the different pandemic waves, Guatemala showed a steady increase in cases, and as of October 2022 it had 64 100 COVID-19 cases per million and 1125 COVID-19 deaths per million *(137)* (Annex Figure 35).

Annex Figure 35. COVID-19 epidemiological data and containment measures over time in Guatemala

Guatemala



Notes: Recom: recommended; kw: key workers; hr: high risk; *key workers / clinically vulnerable groups / older adults.

Sources: Developed by the Evaluation Team for the EPRC based on Our World in Data & WHO Coronavirus (COVID-19) Dashboard.

Guatemala is one of the countries with fewer health workers in LAC[25] *(15)* than other countries, which predisposed the country to a challenging COVID-19 response. In addition, a new president was elected shortly before the pandemic started, and Hurricanes Eta and Iota hit the region during the first pandemic year, adding complexity to the management of the pandemic. The Guatemala MoH led the initial national response and applied situational restriction measures that the President first announced on 6 March 2020, which included closing the borders, prohibiting entry *(138)*.

On behalf of the President, COPRECOVID (Comisión Presidencial de Atención a la Emergencia COVID-19) was formed on 24 May with the objective of advising the President. COPRECOVID was formed by experts, and most of the organizations relied on COPRECOVID as a leading entity. In parallel to COPRECOVID, the MoH cabinet was replaced by a new cabinet due to transparency issues. The new MoH had functions that overlapped with COPRECOVID, leading to confusion. The presidential council unilaterally made some decisions, independently from the MoH, and some decisions had weak supporting scientific evidence, such as publishing the list of COVID-19 positive cases or setting the priority age groups for vaccination. On 6 August, the President announced that the pandemic was now the responsibility of the public, who had to take care of itself. In December 2020, COPRECOVID was dissolved, and the new MoH cabinet took back some of its previous roles.

To acquire vaccines, Guatemala relied on the COVAX mechanism; however, as the vaccine deliveries were delayed, the Government modified the law to allow purchasing of vaccines directly from manufacturers through unilateral agreements. These negotiations and the donations from other countries, which represented 48% of all vaccines delivered in Guatemala (Annex Table 17) *(101)*, led to the introduction of multiple vaccines in the country. Canada, the Dominican Republic, India, Israel, Mexico, Spain, and the United States were among the countries that donated vaccines to Guatemala *(139)*. USAID, PAHO, and UNICEF successfully coordinated to ensure a cold chain for vaccine delivery. The initial lack of vaccines and the high vaccine hesitancy once the vaccines were available characterized the start of the vaccination rollout, which finally began in February 2021. To tackle the low vaccination coverage, PAHO promoted a social/anthropological study that allowed designing of a culturally relevant communication campaign promoting vaccination, which was implemented in December 2021. As of October 2022, 37.9% had completed the vaccination schedule.

PAHO has had a very close relationship with the MoH since the beginning of the pandemic, but cooperation between PAHO and the President was less well established. Through the Health Cluster, co-led by the MoH and PAHO, PAHO provided technical support and supported migrant groups and Indigenous populations, and reproductive health and mental health services, as well as other institutional needs. PAHO supported on a daily basis in the epidemiology department of the MoH by drafting and updating the surveillance protocols and by implementation of the contact-tracing strategy, among other technical aspects, and the MoH fully relied on this support. PAHO provided PPE, ventilators, human resources, and supplies for the national laboratory. PAHO also contributed to setting up a health information system *(1)*. PAHO contributed to the translation of the guidelines into all the dialectal versions of the Mayan language and adapted the messages on risk communication to their culture, supported by the engagement of spiritual leaders. With the support

25 Guatemala has less than 0.3 doctors per 1000 people (LAC average: 2 doctors per 1000 people), less than 1 nurse per 1000 people (LAC average: 9 nurses per 1000 people), and less than 1 hospital bed per 1000 people (LAC average: 2.1 per 1000 people). Organization for Economic Co-operation and Development and The World Bank. Health at a glance: Latin America and the Caribbean 2020. Paris: OECD; 2020 [cited 28 May 2022]. Available from: https://www.oecd.org/health/health-at-a-glance-latin-america-and-the-caribbean-2020-6089164f-en.htm.

of PAHO headquarters, the interreligious committee of Guatemala and PAHO reconciled the messages of the Bible with the health messages and preventive measures.

As observed in most of the countries, political and economic criteria overtook the technical recommendations provided by PAHO, hindering their contribution. COVAX delays affected MoH and PAHO's reputation and led to changes in the MoH.

Haiti

Haiti is a Caribbean country with 11.5 million inhabitants located together with the Dominican Republic on the island of Hispaniola. The Haitian population has a life expectancy of 64 years and a GDP per capita of USD 1653. Haiti has one of the weakest health systems in the Region,[26] the lowest life expectancy at birth, and the highest mortality rate among children under 5 (71.7 deaths per 1000 live births). In Haiti, the first COVID-19 case was confirmed on 19 March 2020, and the first death on 5 April. As of October 2022, Haiti had 2948 COVID-19 cases per million and 74 COVID-19 deaths per million *(137)* (Annex Figure 36).

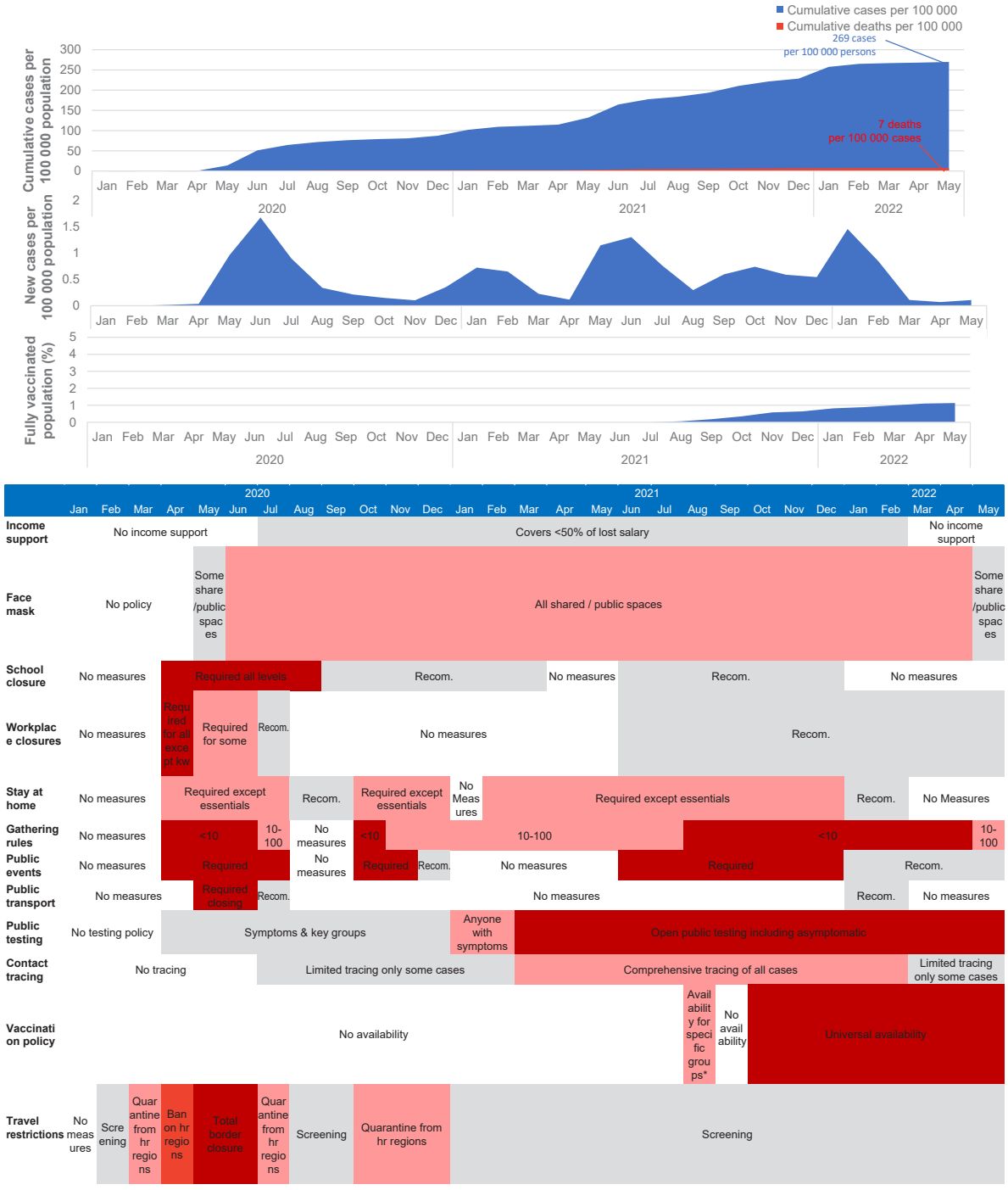
During COVID-19, several overlapping crises affected the Haitian population. The economic crisis, scarcity, and inflation causing supply shortages and frequent energy cuts, the complex social context with violence and political instability, and the assassination of the President in July 2020 represented a complex backdrop to the COVID-19 pandemic. In addition, a 7.1 magnitude earthquake affected the region in August 2020, followed by Hurricane Grace. In October 2022, a cholera outbreak affected Haiti after three years without cases *(140)*. Also, the high prevalence of comorbidities in the population, especially cardiovascular disease (known to be associated with higher COVID-19 severity), pointed to Haiti as an especially vulnerable country for COVID-19 impact. Despite this background and the prognosis of a calamity *(141)*, Haiti is one of the countries with fewer COVID-19 cases and deaths in the Region. The reason behind this low COVID-19 impact is thought to be the young age of the population and the high degree of ventilation in the houses *(130)*.

Initially, it was difficult for the Haitian Government to include COVID-19 response in the political agenda and to advocate for COVID-19 prevention. The population did not perceive COVID-19 as a threat, considering it a foreign disease that would not affect them. There was even hesitancy on acknowledging the existence of the virus. A very limited proportion of the population sought medical help when infected by COVID-19 compared to other countries *(142)*. As mortality due to COVID-19 was lower than expected, this has contributed to minimizing the fear of COVID-19, which is reflected in the low vaccination coverage rate in the country.

The Government reacted to COVID-19 by appointing a Command Crisis Committee, which coordinated the response through several working units from a safe meeting point, the Montana Hotel. PAHO country office played a decisive role in the creation and coordination of that committee. The different units were (1) supply, coordination, and planning, (2) communication and community support, (3) surveillance, intervention, and rapid response teams, (4) point of entry and testing, national labs (5) prevention and control, (6) care and

26 Haiti has less than 0.3 doctors per 1000 people (LAC average: 2 doctors per 1000 people), less than 1 nurse per 1000 people (LAC average: 9 nurses per 1000 people), and less than 1 hospital bed per 1000 people (LAC average: 2.1 per 1000 people). In Haiti, maternal mortality increased between 2000 and 2017, while it decreased by 26% in the Region. Organization for Economic Co-operation and Development and The World Bank. Health at a glance: Latin America and the Caribbean 2020. Paris: OECD; 2020 [cited 28 May 2022]. Available from: https://www.oecd.org/health/health-at-a-glance-latin-america-and-the-caribbean-2020-6089164f-en.htm.

Annex Figure 36. COVID-19 epidemiological data and containment measures over time in Haiti



Notes: Recom: recommended; kw: key workers; hr: high risk; *key workers / clinically vulnerable groups / older adults.

Sources: Developed by the Evaluation Team for the EPRC based on Our World in Data & WHO Coronavirus (COVID-19) Dashboard.

training, and (7) operations and logistics. Each unit was composed of a member of the United Nations (including PAHO), a member from the MoH, and a member of the private sector (including NGOs). The support of the Haitian private sector was key to the delivery of goods through broken and insecure roads, as well as to contributing to ordering oxygen generators and concentrators from China, with which the private sector had existing contacts.

There was good coordination and alignment between the government and PAHO, with frequent communication. PAHO contributed to leading and organizing the national response. The Haitian Government focused the pandemic response in Port-au-Prince, where 35%–40% of the population lives, while PAHO supported the pandemic response in the areas outside Port-au-Prince, integrating the response with local authorities, local epidemiologists, and the community. PAHO contributed to the supply distribution and the epidemiological surveillance, including contact-tracing, training, and setting up a bed capacity monitoring system. PAHO was also helpful in the surveillance on border posts with the Dominican Republic in collaboration with International Organization for Migration (IOM), Partners in Health, and the Haitian Group for the Study of Kaposi's Sarcoma and Opportunistic Infections (GHESKIO) center.

Even before COVID-19 arrived in Haiti, PAHO had already worked on setting up the response by strengthening the epidemiological surveillance and laboratory capacities. The previous experience of cholera and the previously developed Pandemic Influenza Preparedness program contributed to better preparedness.

Haiti relied completely on the COVAX mechanism to access the vaccines (Annex Figure 36). The first shipment arrived in July 2021, and Haiti launched a mass COVID-19 immunization rollout among healthcare workers and adults over 65. PAHO and UNICEF contributed to the vaccination campaign. Vaccination hesitancy is high in the country – less than 2% of the population has been vaccinated, making Haiti the country with the lowest rate in the Region (Annex Table 38).

The PAHO country office tried to navigate through the multiple crises in Haiti. Haiti was the country in the Region with the second-highest budget *(143)*. PAHO coordination with other United Nations agencies was sometimes missing, and the prioritization of the COVID-19 response affected the delivery of the regular programs, as evidenced by a reduction in non-COVID-19 vaccination coverage (reaching 35%), and a drop in the diagnoses of cases of malaria, TB, and HIV. The lack of guidelines in French, the limited francophone PAHO personnel, frequent HR turnover within the Organization, supply problems, slow funding mechanism, and vaccination hesitancy were identified as factors that hindered PAHO's response *(142, 143)*.

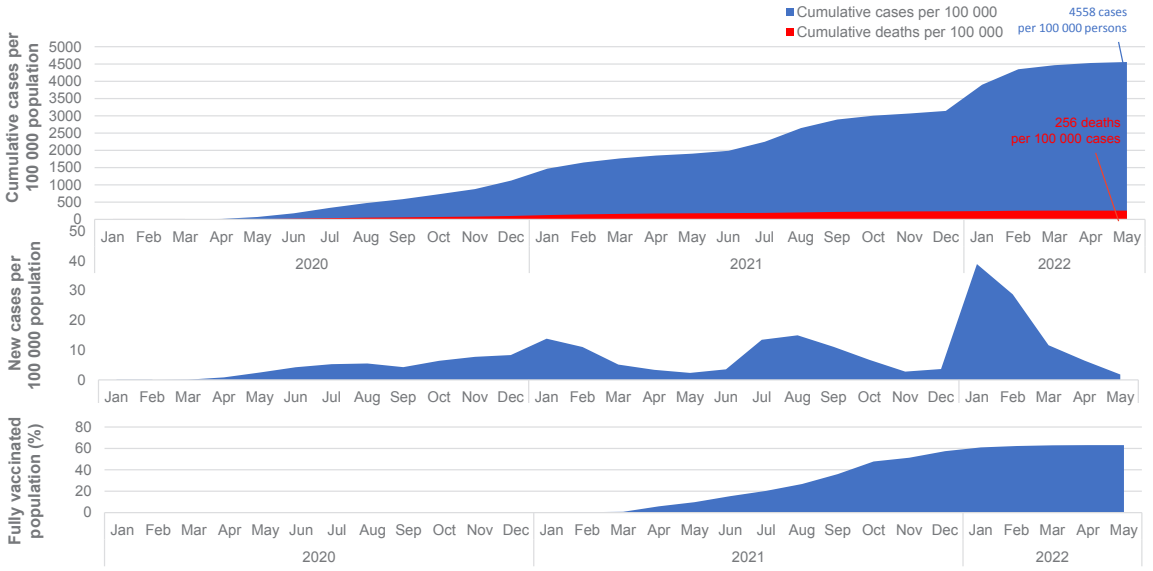
Mexico

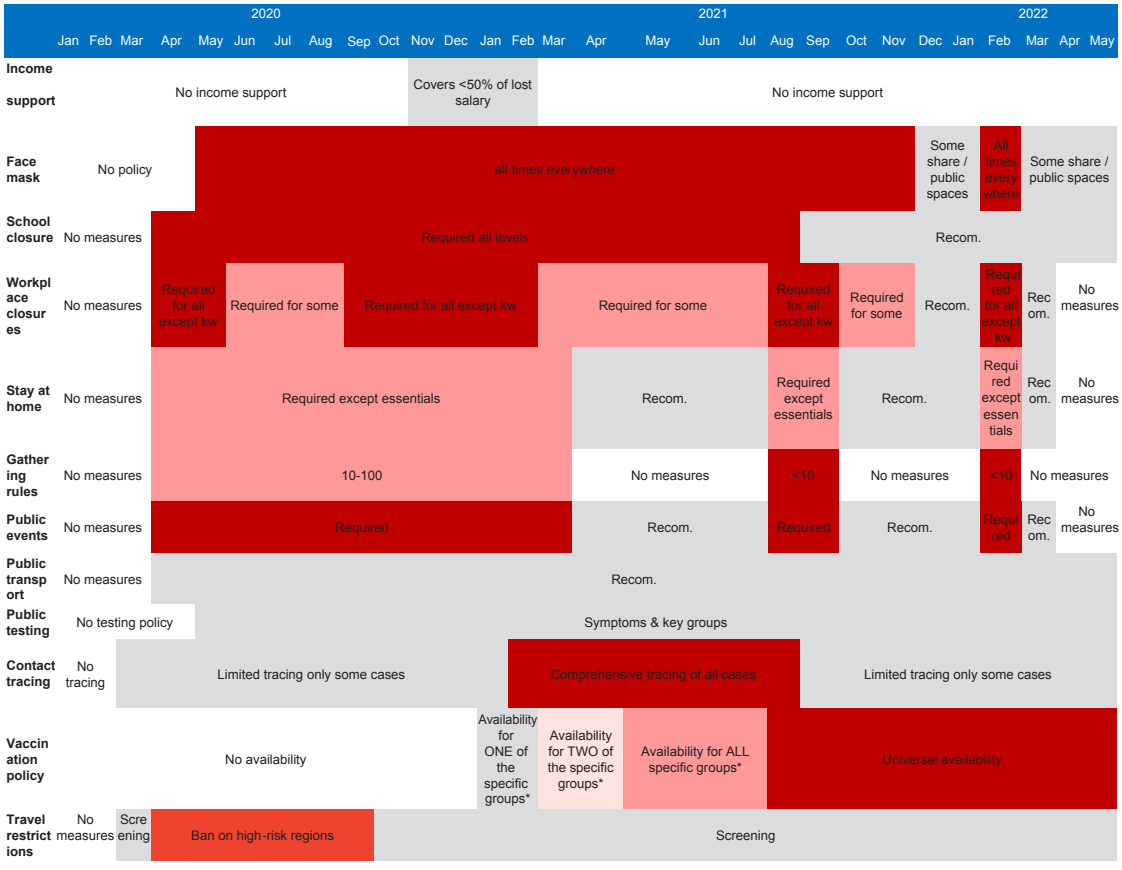
Mexico is a country in North America with 127.5 million inhabitants that borders with Belize, Guatemala, and the United States of America. The Mexican population has a life expectancy of 75 years and a GDP per capita of USD 17 336. In Mexico, the first COVID-19 case was confirmed on 27 February 2020, and the first death on 18 March. As of October 2022, Mexico had 56 000 COVID-19 cases per million, and 2606 COVID-19 deaths per million *(144)* (Annex Figure 37).

The MoH responded to the pandemic by organizing a national meeting of state governors and health authorities to coordinate efforts to respond to COVID-19. The different sectors agreed to participate in working groups to follow the national situation closely. It was also agreed that local and municipal governments would be involved in communicating cases, incidents, and necessary actions *(145)*. However, some states, such as Jalisco, did not follow the national guidelines due to political differences, and the overall coordination presented limitations. On 23 March 2020 (and running until 19 April), the Government of Mexico launched the National Healthy Distance Campaign to stop any nonessential activity nationwide and

Annex Figure 37. COVID-19 epidemiological data and containment measures over time in Mexico

Mexico





Notes: Recom: recommended; kw: key workers; hr: high risk; *key workers / clinically vulnerable groups / older adults.

Sources: Developed by the Evaluation Team for the EPRC based on Our World in Data & WHO Coronavirus (COVID-19) Dashboard.

promote social distancing. On 26 March, after community transmission was identified, additional mandatory restrictions were introduced. In contrast to the other countries in the Region, the central Government of Mexico did not apply travel or border restrictions at any point during the pandemic, despite requests from some of the federal states *(146)*.

The Government was not supportive of the use of face masks, but finally recommended their use one month after it was recommended by WHO. The Government established a risk communication strategy, and the population was informed daily on national security and emergency communications by the MoH and by the President. In addition to the challenges of the COVID-19 response, the pandemic overlapped in Mexico with major health reforms to replace Seguro Popular, which provided health insurance for low-income groups, with a new health financing model led by the Instituto de Salud para el Bienestar (INSABI), leaving gaps in health services. In September 2020, Mexico committed to access the COVID-19 vaccines through the COVAX mechanism; however, 82% of the vaccines were obtained through bilateral or multilateral negotiations using advance-purchase agreements *(101)*. Vaccination rollout started on 24 December 2020, and as of October 2022, 63% of the population had been vaccinated.

PAHO country office contributed to consolidate Mexico as a subregional hub for diagnostic and genomic surveillance in the Region through the Epidemiological Diagnosis and Reference Institute (InDRE). InDRE implemented the COVID-19 diagnostic protocol by 20 January 2020, and quickly provided diagnostic training to the rest of the region. This surveillance network is now being applied to mpox virus surveillance. PAHO country office formulated a community COVID-19 prevention strategy based on primary care networks and a national vaccination strategy for three levels of care: community, family, and person. PAHO also contributed to implement a nominal vaccination record and an adverse events record, which had not existed before.

PAHO country office developed and disseminated three new instruments: (1) the publication of the excess mortality every 15 days, (2) a tool for investigating outbreaks and contact-tracing for COVID-19 and mpox (Go.Data platform), and (3) the development of emergency health units for warning and response. PAHO country office provided support to Indigenous populations as well as vulnerable groups, such as migrants and mobile populations, through cooperation with MoH, IOM, UN High Commissioner for Refugees (UNHCR), and International Committee of the Red Cross (ICRC) *(147)*. Risk communication was supported by studies led by PAHO on social perceptions, which contributed to better tailoring the communication strategy *(127)*. The relation between the Mexican Government and PAHO was well established and was based on trust both at the national and regional levels.

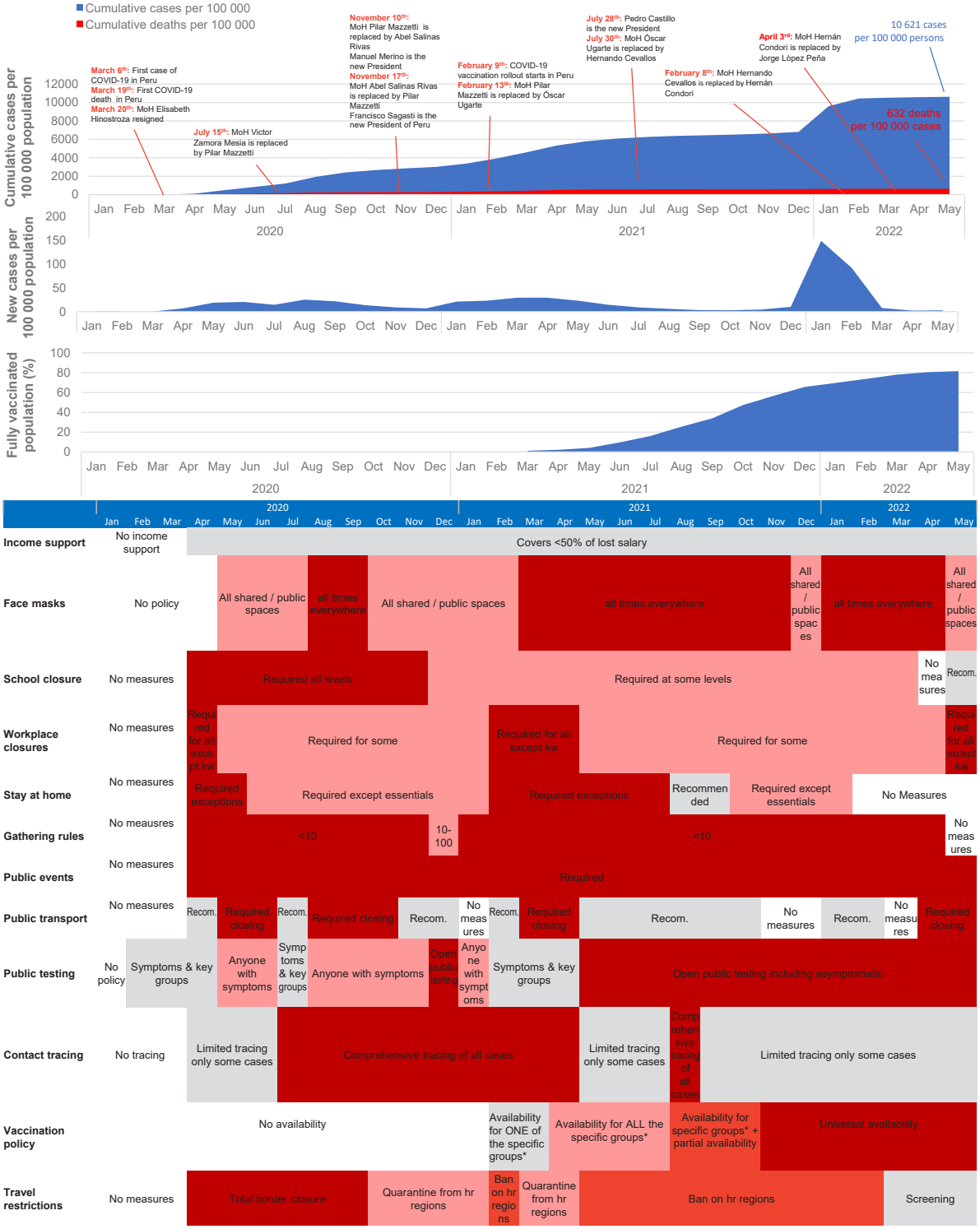
The evaluation found that despite PAHO country office preparing for the response and leading the diagnostic and surveillance response in the region, this was not enough. As observed in other countries, regular services could not be maintained during the COVID-19 response; hence, regular vaccination and regular medical services were drastically reduced (127). The response was heavily politicized and, despite the good relationship with the Government, national sovereignty prevailed. The Revolving Fund was not efficient enough, and the implementation of COVAX was assessed as frustrating *(127)*. Finally, the lack of human and economic resources caused by lack of past health investment hindered the COVID-19 response in Mexico *(146)*.

Peru

Peru is a country in South America with a population of 33.36 million inhabitants that borders Bolivia (Plurinational State of), Brazil, Chile, Colombia, and Ecuador. The Peruvian population has a life expectancy of 76 years and a GDP per capita of USD 12 236. Peru reported its first case of COVID-19 on 5 March 2020. Its spread was rapid and exponential until community transmission was established. From 3 January 2020 to 31 October 2022, Peru had 123 034 COVID-19 cases per million and 6427 COVID-19 deaths per million. Peru was the first country worldwide to have the highest number of COVID-19 deaths per million population, but 89.6% of the population completed the vaccination schedule *(54)* (Annex Figure 38).

Annex Figure 38. COVID-19 epidemiological data and containment measures over time in Peru

Peru



Notes: Recom: recommended; kw: key workers; hr: high risk; *key workers / clinically vulnerable groups / older adults.

Sources: Developed by the Evaluation Team for the EPRC based on Our World in Data & WHO Coronavirus (COVID-19) Dashboard.

Peru was one of the first Latin American countries to demand that people stay at home to stop the virus from spreading. On 11 March 2020, the Peruvian Government declared a state of health emergency nationwide for 90 days, which was extended. From 16 March 2020, quarantine measures were declared at the national level, such as the closure of borders and other measures to contain the transmission of the virus, which were extended until 31 July 2020; subsequently, targeted quarantines were established in regions and provinces with a high rate of infections.

The pandemic gained a strong political connotation in Peru, as it did in other countries in the Region. The COVID-19 pandemic did not alleviate the political crisis that Peru has been experiencing for years. During the first year of the pandemic, Peru experienced new tensions between the executive and legislative, changes of presidents and ministers, and a scandal over the secret vaccination of senior officials *(54)*. From the beginning of the pandemic to September 2022, Peru had eight ministers of health and four presidents. The political instability and the structural constraints of the Peruvian state affected the country's capacity to respond to COVID-19, producing less-than-desirable results in responding to the health emergency.

In this context, PAHO country office supported the national and subnational health systems in coordinating the response to the pandemic, and PAHO country office personnel were part of the Government's committee on COVID-19 response and other technical committees in the interministerial central command of the pandemic response *(127, 128)*. The country office COVID-19 emergency response plan – an important instrument that focused on equity and a sustainable health system – was completed before the pandemic hit the country. With the onset of the pandemic in the Americas, the country office supported the country in the preparation of its COVID-19 response plan.

At the start of the pandemic, the country office reassigned a new IMT with more experience to deal with the pandemic in the region; before then, a national consultant who did not have experience of emergencies had been handling incident management. Also, in Peru the country office could align its work with the subregional level, as the PWR in charge at the beginning of the pandemic was the subregional representative as well. By the end of 2020, Peru had a new PWR and subregional representative.

Peru's pandemic needs were generated at the country level in close collaboration with the PWR and the MoH. However, to assess the country's needs, it was not easy to know which inputs were needed because the government did not have consolidated health information. In Peru, the health system is decentralized and split into five entities, resulting in multiple service and insurance providers with a high degree of overlap and little coordination. The main needs at the start of the pandemic were related to access to PPE and diagnostic equipment *(127, 128)*. In the beginning, the country office used the flexible emergency fund to support the country.

According to interviews with PAHO's counterparts, Peru had a shortage of PPE. Unlike other countries in the Region, Peru did not prepare to buy PPE. Also, at the beginning of the pandemic the first minister of health did not have experience in public health, and the MoH made a risky decision to close the units of the first level of primary care, fearing infections from health personnel. The consequence of this was a rapid increase in COVID-19 cases, and as Peru did not have enough PPE, healthcare workers started to die. PAHO had an important role in helping to obtain PPE for healthcare personnel.

PAHO made recommendations on developing or adapting plans, strategies, and protocols for case management, telemedicine, epidemiological surveillance, IPC, biosecurity, procurement, and more. However, there were some disagreements, such as on the use of ivermectin and hydroxychloroquine, two treatments rejected by WHO and PAHO. PAHO also supported the distribution of some equipment and supplies for

hospitals in the areas with the largest population, which also had the largest urban sectors and marginalized populations.

PAHO collaborated with the regional governments of Ancash, Loreto, Piura, Tumbes, and Ucayali on the reopening of primary healthcare services, rapid response teams, appropriate use of PPE, and services for refugees and migrants, and it designed a COVID-19 plan for health facilities on the borders with Brazil and Colombia to provide care for Indigenous populations. Nevertheless, it was not easy to work with the population because there were cultural barriers to providing healthcare services. In the areas with Indigenous population, PAHO country office worked on services such as telemedicine, risk communication, and maternity *(127, 128)*.

Together with the private sector, PAHO country office with the World Food Programme (WFP) implemented a plan with the regional government of Ancash to contain COVID-19 transmission at the primary level of care by increasing the surveillance and case management capacity of COVID-19 cases, facilitating food access to COVID-19 patients in quarantine, and improving the ability to follow up, care for, and refer probable cases or those confirmed at the first level of health care *(148)*. Joint actions were implemented with United Nations agencies (ILO, IOM, UNODC, UNESCO, UNFPA, UNHCR, UNICEF, and UNOPS) to guide the response with regard to Indigenous populations, people in prisons, access to health services for the migrant population, risk communication, national and international logistics of sanitary supplies and equipment, food security, human rights, and water and sanitation.

The PAHO country office was highlighted for its role in risk communication and community engagement *(127)*. It had a crucial role in informing the public and tackling the infodemic and also collaborated in the implementation of risk communication plans of the MoH and Council of Ministers in 13 regions in Peru. It trained 300 journalists and 50 communicators and strengthened 10 risk communication plans. Also, PAHO supported the development of a COVID-19 containment community engagement plan with an intercultural approach for three regions (Amazonas, Ancash, and Ucayali) and strengthened community COVID-19 committees in Amazonas and Ancash in contact referral, diagnostics, and treatment. Likewise, PAHO's communications strategy was important in mobilizing resources and keeping in-country partners updated about the COVID-19 situation in the country, as the government did not report to them.

Furthermore, to support the disclosure of information about COVID-19, PAHO country office designed, adapted, and distributed information materials for pregnant women, older persons, 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, and broadcast on six commercial and community radio channels. Also, studies were carried out on the impact of the pandemic on the first level of care and the maturity of health information systems, basic information for the next steps in the recovery of post-pandemic health actions.

Peru relied mainly on the COVAX Facility to access the vaccines, requesting the maximum number of vaccines. Peru was among the first countries in the Americas to receive COVAX vaccines in March 2021 *(149)*. The Government has never expressed frustration with the COVAX Facility, as it is the main source of access to vaccines for the country. PAHO and UNICEF, from the beginning, coordinated vaccine deliveries. Also, they made joint communications and press releases, which helped the coordination *(127, 128)*.

However, as the COVAX Facility mechanism had problems and delays in vaccine delivery, this affected the country's ability to respond to COVID-19. Peru delayed making an external agreement to access the vaccines

outside the COVAX Facility, and when it tried it faced competition, where the richest countries started hoarding medicines and made advance purchase of doses. In addition, although Peru began its COVID-19 lockdown on 16 March 2020, when there were only 71 cases in the country, the increase in COVID-19 cases revealed structural weaknesses in the Peruvian health system, which led to the collapse of health services.

In addition, despite PAHO's recommendations, the Government of Peru was slow in purchasing important supplies to respond to the pandemic, which made it difficult to purchase diagnostics tests, ventilators, and oxygen, for example, because they were not available on the market. Due to this situation, Peru received bilateral support to aid its fight against COVID-19 due to having the highest COVID-19 cumulative per capita death rate. In some cases, PAHO and other United Nations agencies in the territory also supported the mobilization of external resources as part of the needs assessment. Most of the external funds were to provide more healthcare workers, supplies for laboratories and primary care, and PPE *(127, 128)*.

In Peru, some international PAHO consultants refused to participate in the emergency response because it was not within the terms of their contracts *(127, 128)*.

Annex 8.
Turnover of PAHO/WHO Representatives

The following list shows the names of new PAHO/WHO Representative (PWRs) and the date when they started in the position, by country.

2020:

1. ECC: Yitades Gebre (Jan 2020)
2. SUR: Karen Lewis-Bell (Jan 2020)
3. ECU a.i.: Adrian Diaz (Sep 2020)
4. HTI : Maureen Birmingham (Sep 2020)
5. VEN : Pier Paolo Balladelli (Sep 2020)
6. GUY: Luis Felipe Codina (Oct 2020)
7. PER: Carlos Garzón (Nov 2020)
8. DOM: Olivier Ronvaux (Nov 2020)

2021:

1. BHS: Eldonna Boisson (Jan 2021)
2. VEN a.i.: Gerardo de Cosio (Mar 2021)
3. LSV: Giovani Escalante (Apr 2021)
4. URY a.i.: Lilian Reneau-Vernon (Apr 2021)
5. PRY a.i.: Haydeé Padilla (Apr 2021)
6. ARG a.i.: Pier Paolo Balladelli (Apr 2021)
7. JAM a.i.: Audrey Morris (Jun 2021)
8. ARG: Eva Jané Llopis (Aug 2021)
9. SPD-SAM : Pier Paolo Balladelli (Aug 2021)
10. URY: Hernán Montenegro (Sep 2021)
11. JAM: Ian Stein (Sep 2021)
12. ECU: Oscar Barreneche (Nov 2021)
13. VEN a.i.: Franklin Hernández (Sep 2021)
14. GTM a.i.: Lilian Reneau-Vernon (Oct 2021)

2022:

1. MEX a.i. : Miguel Malo (Jan 2022)
2. SPD-CAM a.i.: Juan Manuel Sotelo(Jan 2022)
3. PRY: Marcelo Korc (Feb 2022)
4. VEN: Christian Morales (Feb 2022)
5. GTM: Gerardo Alfaro (Feb 2022)
6. PAN a.i.: Jorge Ernesto Victoria (Mar 2022)
7. ECC a.i.: Karen Polson (Apr 2022)
8. ECC: Amalia Del Riego (July 2022)
9. PAN: Ana Cinnamond-Riviere (Aug 2022)

Annex 9.
EPRC launch agenda

Evaluation of PAHO's Response to COVID-19 (EPRC)
Workshop, PAHO Headquarters, Room 1017, Washington, D.C.,
5–7 July 2022

Objectives:

- To finalize the inception phase.
- To officially launch the evaluation across PASB (headquarters, subregions, and country offices).
- To start data collection through virtual and, where possible, face-to-face interviews with key informants (internal/PAHO staff and external/counterparts).

Participants

- Evaluation Team: Leadership, senior team members and one research assistant (RA); other RAs join remotely.
- PBE: Director, Senior Evaluation Advisor, consultants, and support team.

5TH JULY	
Morning from 8:30 p.m.	• Engagement of Evaluation Team and PBE to finalize plans for evaluation launch and discussion around ERG comments (as relevant) and closing inception phase
Afternoon until 5:00 p.m.	• 2:00–3:30 p.m. – Launch of evaluation and presentation to PAHO EXM and managers - Opening – PAHO Director - Objectives and presentation of the Evaluation Team - Overview of the evaluation and the draft inception report - Q&A: all participants - Closing • 3:30–5:00 p.m. – Evaluation launch takeaways and implications for the inception report – finalization and data collection
6TH JULY	**ITEMS**
Morning from 8:30 a.m.	• Evaluation launch takeaways and implications for the inception report (cont.) • Finalization of staff survey and preparation for its launch
Afternoon until 5:00 p.m.	• Finalization of staff survey and preparation for its launch (cont.) • Key informant interviews – internal and external (in parallel)

7TH JULY	ITEMS
Morning from 8:30 a.m.	• Finalization of staff survey and preparation for its launch (cont.) • Key informant interviews – internal and external (cont.)
Afternoon until 5:00 p.m.	• Finalization of the inception report • Key informant interviews – internal and external counterparts (cont.) • Summary outcomes and debrief of Evaluation Team with PBE and senior external advisors
8TH JULY	**ITEMS**
Morning	Key informant interviews – external (cont.) – to be conducted by the Evaluation Team Lead

References

1. Pan American Health Organization. Response to the COVID-19 pandemic in the Americas: response strategy and donor appeal. January–December 2021. Washington, D.C.: PAHO; 2021 [cited 10 December 2022]. Available from: https://iris.paho.org/handle/10665.2/53540.

2. Pan American Health Organization. PAHO weekly COVID-19 epidemiological update—8 Mar 2022. Washington, D.C.: PAHO; 2022 [cited 19 December 2022]. Available from: https://iris.paho.org/handle/10665.2/55817.

3. Pan American Health Organization. Geo-hub COVID-19—Information system for the Region of the Americas. Washington, D.C.: PAHO; 2022. Available from: https://paho-covid19-response-who.hub.arcgis.com/.

4. Pan American Health Organization. Pan American Health Organization response to COVID-19 in the Americas. January–December 2020. Washington, D.C.: PAHO; 2021 [cited 10 December 2022]. Available from: https://iris.paho.org/handle/10665.2/54013.

5. World Health Organization. Third round of the global pulse survey on continuity of essential health services during the COVID-19 pandemic: November–December 2021—interim report. Geneva: WHO; 2022 [cited 10 December 2022]. Available from: https://www.who.int/publications/i/item/WHO-2019-nCoV-EHS_continuity-survey-2022.1.

6. Pan American Health Organization. CD59/INF/1—Update on COVID-19 in the Region of the Americas. Washington, D.C.: PAHO; 2021.

7. Pan American Health Organization. Coronavirus disease (COVID-19) pandemic. Washington, D.C.: PAHO; 2023. Available from: https://www.paho.org/en/topics/coronavirus-infections/coronavirus-disease-covid-19-pandemic.

8. World Health Organization. Infodemic. Geneva. WHO; 2023. Available from: https://www.who.int/health-topics/infodemic#tab=tab_1.

9. Pan American Health Organization. Understanding the infodemic and misinformation in the fight against COVID-19. Washington, D.C.: PAHO; 2021. Available from: https://iris.paho.org/handle/10665.2/52052.

10. Cosgrave J, Ramalingam B, Beck T. Real-time evaluations of humanitarian action. An ALNAP guide, pilot version [place and date unknown]. Available from: https://www.alnap.org/system/files/content/resource/files/main/rteguide.pdf.

11. United Nations Evaluation Group. UNEG norms and standards for evaluation (2016). New York: UNEG; 2016 [cited 20 December 2022]. Available from: http://www.unevaluation.org/document/detail/1914.

12. United Nations Evaluation Group. UNEG ethical guidelines for evaluation. New York: UNEG; 2022 [cited 20 December 2022]. Available from: http://www.unevaluation.org/document/detail/2866.

13. United Nations Evaluation Group. UNEG code of conduct for evaluation in the UN system. New York: UNEG; 2022 [cited 20 December 2022]. Available from: http://www.unevaluation.org/document/detail/100.

14. World Health Organization. Evaluation practice handbook. Geneva: WHO; 2013. Available from: https://apps.who.int/iris/handle/10665/96311.

15. Organisation for Economic Co-operation and Development and The World Bank. Health at a glance: Latin America and the Caribbean 2020. Paris: OECD; 2020 [cited 28 May 2022]. Available from: https://www.oecd-ilibrary.org/social-issues-migration-health/health-at-a-glance-latin-america-and-the-caribbean-2020_6089164f-en.

16. Pan American Health Organization. Core indicators. PLISA health information platform for the Americas. Washington, D.C.: PAHO; 2021 [cited 24 May 2022]. Available from: https://opendata.paho.org/en/core-indicators/visualizations.

17. Economic Commission for Latin America and the Caribbean. Panorama social de América Latina 2019. CEPAL; 2019 [cited 19 December 2022]. Available from: https://repositorio.cepal.org/handle/11362/44969.

18. Dmytraczenko T, Almeida G. Toward universal health coverage and equity in Latin America and the Caribbean: evidence from selected countries. In: Dmytraczenko T, Almeida G, (editors). Toward universal health coverage and equity in Latin America and the Caribbean: evidence from selected countries. Washington, D.C: World Bank; 2015 [cited 28 May 2022]. Available from: https://openknowledge.worldbank.org/handle/10986/22026.

19. Kanavos P, Parkin GC, Kamphuis B, Gill J. Latin America healthcare system overview: a comparative analysis of fiscal space in healthcare. London: The London School of Economics and Political Science; 2019 [cited 27 May 2022]. Available from: https://www.lse.ac.uk/business/consulting/reports/latin-america-healthcare-system-overview.

20. World Bank. Fertility rate, total (births per woman)—Latin America & Caribbean, North America. World Bank Data. Washington, D.C.: World Bank; 2022 [cited 28 May 2022]. Available from: https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=ZJ-XU.

21. World Health Organization. Global health estimates: leading causes of death. Geneva: WHO; 2019 [cited 28 May 2022]. Available from: https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death.

22. Economic Commission for Latin America and the Caribbean. Challenges and opportunities for the implementation, follow-up and review of SDG 3 and its targets. Santiago: ECLAC; 2019 [cited 28 May 2022]. Available from: https://www.cepal.org/sites/default/files/static/files/sdg3_c1900666_press.pdf.

23. Pan American Health Organization. Visualizations. PLISA health information platform for the Americas. Washington, D.C.: PAHO; 2021 [cited 24 May 2022]. Available from: https://opendata.paho.org/en/core-indicators/visualizations.

24. Pan American Health Organization. Health trends, 1995–2019. PLISA health information platform for the Americas. Washington, D.C.: PAHO; 2021 [cited 24 May 2022]. Available from: https://opendata.paho.org/en/core-indicators/health-trends-1995-2019.

25. Economic Commission for Latin America and the Caribbean. Challenges and opportunities for the implementation, follow-up and review of SDG 3 and its targets. Santiago: ECLAC; 2019 [cited 28 May 2022]. Available from: https://www.cepal.org/sites/default/files/static/files/sdg3_c1900666_press.pdf.

26. Gilardino RE, Valanzasca P, Rifkin SB. Has Latin America achieved universal health coverage yet? Lessons from four countries. Arch Public Health. 2022;80(1):1–11. Available from: https://archpublichealth.biomedcentral.com/articles/10.1186/s13690-022-00793-7.

27. Atun R, Odorico Monteiro de Andrade L, Almeida G, Cotlear D, Dmytraczenko T, Frenz P, et al. Health-system reform and universal health coverage in Latin America. Lancet. 2015;385(9974):1230–1247. Available from: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(14)61646-9/fulltext.

28. Mascayano F, Alvarado R, Martínez-Viciana C, Irarázaval M, Durand-Arias S, Freytes M, et al. 30 years from the Caracas Declaration: The situation of psychiatric hospitals in Latin America and the Caribbean prior, during and after the COVID-19 pandemic. Soc Psychiatry Psychiatr Epidemiol. 2021;56(8):1325–1327. Available from: https://europepmc.org/article/pmc/pmc8097106.

29. Abramo L, Cecchini S, Ullmann H. Addressing health inequalities in Latin America: the role of social protection. Cien Saude Colet. 2020;25(5):1587–1598. Available from: http://www.scielo.br/j/csc/a/PFhr78GpvfrpSCsb4VhVp7x/?lang=en.

30. Pan American Health Organization. Just societies: Health equity and dignified lives. Report of the Commission of the Pan American Health Organization on Equity and Health Inequalities in the Americas. Washington D.C.: PAHO; 2019 [cited 29 May 2022]. Available from: http://iris.paho.org/xmlui/handle/123456789/51571.

31. Yeh KB, Parekh FK, Borgert B, Olinger GG, Fair JM. Global health security threats and related risks in Latin America. Global Secur Health Sci Policy. 2021;6(1):18–25. Available from: https://www.tandfonline.com/doi/abs/10.1080/23779497.2021.1917304.

32. Pan American Health Organization. Topics: Dengue. Washington, D.C.: PAHO; 2022 [cited 29 May 2022]. Available from: https://www.paho.org/en/topics/dengue.

33. Pan American Health Organization. Data – Dengue and severe dengue. PLISA health information platform for the Americas. Washington, D.C.: PAHO; 2022 [cited 29 May 2022]. Available from: https://www3.paho.org/data/index.php/en/mnu-topics/indicadores-dengue-en.html.

34. Pan American Health Organization. CD57/INF/4 Implementation of the international health regulations (IHR). Washington, D.C.: PAHO; 2022 [cited 20 Jun 2022]. Available from: https://iris.paho.org/handle/10665.2/51629.

35. Pan American Health Organization. Data – Zika. PLISA health information platform for the Americas. Washington, D.C.: PAHO; 2022 [cited 29 May 2022]. Available from: https://www3.paho.org/data/index.php/en/mnu-topics/zika.html.

36. Pan American Health Organization. Timeline of emergence of Zika virus in the Americas. Washington, D.C.: PAHO; 2016 [cited 19 May 2022]. Available from: https://www3.paho.org/hq/index.php?option=com_content&view=article&id=11959:timeline-of-emergence-of-zika-virus-in-the-americas&Itemid=41711&lang=en.

37. Pan American Health Organization. Data – Chikungunya. PLISA health information platform for the Americas. Washington, D.C.: PAHO; 2022 [cited 29 May 2022]. Available from: https://www3.paho.org/data/index.php/en/mnu-topics/chikv-en.html.

38. Pan American Health Organization. Yellow fever. Washington, D.C.: PAHO; 2022 [cited 29 May 2022]. Available from: https://www.paho.org/en/topics/yellow-fever.

39. Pan American Health Organization. PAHO health emergency information and risk assessment unit. Epidemic diseases – yellow fever in the Americas. Washington, D.C.: PAHO; 2022 [cited 29 May 2022]. Available from: https://ais.paho.org/phip/viz/ed_yellowfever.asp.

40. Pan American Health Organization. PAHO health information platform – immunization measles Washington, D.C.: PAHO; 2022 [cited 29 May 2022]. Available from: https://ais.paho.org/phip/viz/im_vaccinepreventablediseases.asp.

41. Pan American Health Organization. Interactive malaria statistics 2010. Washington, D.C.: PAHO; 2010 [cited 29 May 2022]. Available from: https://www3.paho.org/hq/index.php?option=com_content&view=article&id=2632:2010- interactive-malaria-statistics&Itemid=2130&lang=en.

42. Pan American Health Organization. Mpox cases – Region of the Americas. Washington, D.C.: PAHO; 2022 [cited 19 December 2022]. Available from: https://shiny.pahobra.org/monkeypox/.

43. Pan American Health Organization. PAHO urges increased polio vaccination of children in the Americas. Washington, D.C.: PAHO; 2022 [cited 19 December 2022]. Available from: https://www.paho.org/en/news/23-2-2022-paho-urges-increased-polio-vaccination-children-americas.

44. World Health Organization. Acute public health events assessed by WHO regional offices for Africa, the Americas, and Europe under the international health regulations (2005)—2020 report. Geneva: WHO; 2022 [cited 29 May 2022]. Available from: https://www.paho.org/en/documents/acute-public-health-events-assessed-who-regional- offices-africa-americas-and-europe-5.

45. Espinal M, Aldighieri S, St. John R, Becerra-Posada F, Etienne C. International health regulations, ebola, and emerging infectious diseases in Latin America and the Caribbean. Am J Public Health. 2018;108(S6):S466–469. Available from: https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2015.302969.

46. Aavitsland P, Aguilera X, Al-Abri SS, Amani V, Aramburu CC, Attia TA, et al. Functioning of the International Health Regulations during the COVID-19 pandemic. Lancet. 2021;9;398(10308):1283–1287. Available from: https://linkinghub.elsevier.com/retrieve/pii/S0140673621019115.

47. World Health Organization. WHO-convened global study of origins of SARS-CoV-2, joint WHO-China Study. Geneva: WHO; 2021.

48. World Health Organization. Director-General's opening remarks at the media briefing on COVID-19. Geneva: WHO; 2020 [cited 17 December 2022]. Available from: https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020.

49. World Health Organization. Tracking SARS-CoV-2 variants. Geneva: WHO; 2022 [cited 29 May 2022]. Available from: https://www.who.int/en/activities/tracking-SARS-CoV-2-variants/.

50. World Health Organization. COVID-19 weekly epidemiological update. 25 May 2022; (Edition 93). Geneva: WHO; 2022.

51. World Health Organization. Emergence of sublineages and recombination events: Genetic evolution of SARS-CoV-2. 13 April 2022. Geneva: WHO; 2022.

52. Vaccines International Pregnancy Exposure Registry Group COVID19 vaccine tracker team. COVID-19 vaccine tracker: Approved Vaccines. 2022 [cited 29 May 2022]. Available from: https://covid19.trackvaccines.org/vaccines/approved/.

53. World Health Organization. COVID-19 vaccine tracker and landscape. R&D Blueprint. Geneva: WHO; 2022 [cited 29 May 2022]. Available from: https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines.

54. World Health Organization. WHO coronavirus (COVID-19) dashboard. Geneva: WHO; 2022 [cited 12 December 2022]. Available from: https://covid19.who.int/.

55. Pan American Health Organization. COVID-19 vaccine doses administered in the Americas. Washington, D.C.: PAHO; 2022 [cited 29 May 2022]. Available from: https://ais.paho.org/imm/IM_DosisAdmin-Vacunacion.asp.

56. Mathieu E, Ritchie H, Rodés-Guirao L, Appel C, Giattino C, Hasell J, et al. Coronavirus pandemic (COVID-19). Oxford: Our World in Data; 2020. Available from: https://ourworldindata.org/covid-vaccinations#what-share-of-the-population-has- completed-the-initial-vaccination-protocol.

57. Amnesty International. Américas: Desigual y Letal: Cinco claves para recuperarse de la crisis de derechos humanos que desató la pandemia en América Latina y el Caribe. 2022 [cited 16 December 2022]. Available from: https://www.amnesty.org/es/documents/amr01/5483/2022/es/.

58. Pan American Health Organization. COVID-19 trends – dashboard. Washington, D.C.: PAHO; 2022. Available from: https://shiny.pahobra.org/ems/.

59. Sirleaf EJ, Clark H. Report of the Independent Panel for Pandemic Preparedness and Response: making COVID-19 the last pandemic. Lancet. 2021;398(10295):101–103. Available from: https://linkinghub.elsevier.com/retrieve/pii/S0140673621010953.

60. World Health Organization. Second round of the national pulse survey on continuity of essential health services during the COVID-19 pandemic: January-Mar 2021: interim report, 22 April 2021. Geneva: WHO; 2021.

61. Pan American Health Organization. 20th vaccination week in the Americas aims to vaccinate nearly 140 million people. Washington, D.C.: PAHO; 2022 [cited 17 December 2022]. Available from: https://www.paho.org/en/news/22-4-2022-20th-vaccination-week-americas-aims-vaccinate-nearly-140-million-people.

62. Wauters M, Zamboni Berra T, de Almeida Crispim J, Arcêncio RA, Cartagena-Ramos D. Calidad de vida del personal de salud durante la pandemia de COVID-19: revisión exploratoria. Rev Panam Salud Publica. 2022;46:e30. Available from: https://iris.paho.org/handle/10665.2/55930.

63. Benites-Zapata VA, Urrunaga-Pastor D, Solorzano-Vargas ML, Herrera-Añazco P, Uyen-Cateriano A, Bendezu-Quispe G, et al. Prevalence and factors associated with food insecurity in Latin America and the Caribbean during the first wave of the COVID-19 pandemic. Heliyon. 2021;7(10):e08091. Available from: https://linkinghub.elsevier.com/retrieve/pii/S2405844021021940.

64. Hennis AJM, Coates A, del Pino S, Ghidinelli M, Gomez Ponce de Leon R, Bolastig E, et al. COVID-19 and inequities in the Americas: lessons learned and implications for essential health services. Rev Panam Salud Publica. 2021;45:e130. Available from: https://iris.paho.org/handle/10665.2/55418.

65. Buss LF, Prete CA, Abrahim CMM, Mendrone A, Salomon T, de Almeida-Neto C, et al. Three-quarters attack rate of SARS-CoV-2 in the Brazilian Amazon during a largely unmitigated epidemic. Science. 2021;371(6526):288–292. Available from: https://www.science.org/doi/10.1126/science.abe9728.

66. Reyes-Vega MF, Soto-Cabezas MG, Cárdenas F, Martel KS, Valle A, Valverde J, et al. SARS-CoV-2 prevalence associated to low socioeconomic status and overcrowding in an LMIC megacity: A population-based seroepidemiological survey in Lima, Peru. EClinicalMedicine. 2021;34:100801. Available from: https://linkinghub.elsevier.com/retrieve/pii/S258953702100081X.

67. Millett GA, Jones AT, Benkeser D, Baral S, Mercer L, Beyrer C, et al. Assessing differential impacts of COVID-19 on black communities. Ann Epidemiol. 2020;47:37–44. Available from: https://linkinghub.elsevier.com/retrieve/pii/S1047279720301769.

68. Pan American Health Organization. Análisis de género y salud: COVID-19 en las Américas. Washington, D.C.: PAHO; 2021. Available from: https://iris.paho.org/handle/10665.2/55557.

69. United Nations Population Fund. El impacto de COVID-19 en el acceso a los anticonceptivos en América Latina y el Caribe. New York: UNFPA; 2022 [cited 28 May 2022]. Available from: https://lac.unfpa.org/es/publications/el-impacto-de-covid-19-en-el-acceso-los-anticonceptivos-en-américa-latina-y-el-caribe.

70. Burgess M, Dulieu N. The hidden impact of COVID-19 on child education. London: Save the Children International; 2020.

71. United Nations Children's Fund. Ensuring their inclusion in COVID-19 response strategies and evidence generation. New York: UNICEF; 2020.

72. United Nations Children's Fund. Using data to shed light on the well-being of children with disabilities. New York: UNICEF; 2021.

73. Economic Commission for Latin America and the Caribbean. Persons with disabilities and coronavirus disease (COVID-19) in Latin America and the Caribbean: status and guidelines. Santiago: ECLAC; 2020.

74. Pinilla-Roncancio M. Data collection and inclusion of the population with disabilities during the COVID-19 pandemic in Latin America and the Caribbean. Rev Panam Salud Publica. 2022;46:e44. Available from: https://doi.org/10.26633/RPSP.2022.44.

75. Argoty-Pantoja AD, Robles-Rivera K, Rivera-Paredez B, Salmerón J. COVID-19 fatality in Mexico's indigenous populations. Public Health. 2021;193:69–75. Available from: https://linkinghub.elsevier.com/retrieve/pii/S0033350621000457.

76. Millalen P, Nahuelpan H, Hofflinger A, Martinez E. COVID-19 and indigenous peoples in Chile: vulnerability to contagion and mortality. AlterNative: An International Journal of Indigenous Peoples. 2020;16(4):399–402. Available from: http://dx.doi.org/10.1177/1177180120967958.

77. Cifuentes MP, Rodriguez-Villamizar LA, Rojas-Botero ML, Alvarez-Moreno CA, Fernández-Niño JA. Socioeconomic inequalities associated with mortality for COVID-19 in Colombia: a cohort nationwide study. J Epidemiol Community Health. 2021;75(7):610–615. Available from: https://jech.bmj.com/lookup/doi/10.1136/jech-2020-216275.

78. Economic Commission for Latin America and the Caribbean and others. The impact of COVID-19 on indigenous peoples in Latin America (Abya Yala): Between invisibility and collective resistance. Santiago: ECLAC; 2021. Available from: https://www.cepal.org/sites/default/files/publication/files/46698/S2000893_en.pdf.

79. International Organization for Migration. Large movements of highly vulnerable migrants in the Americas from the Caribbean, Latin America and other regions. Geneva: IOM; 2021.

80. Bojorquez-Chapela I, Strathdee SA, Garfein RS, Benson CA, Chaillon A, Ignacio C, et al. The impact of the COVID-19 pandemic among migrants in shelters in Tijuana, Baja California, Mexico. BMJ Glob Health. 2022;7(3):e007202. Available from: https://gh.bmj.com/lookup/doi/10.1136/bmjgh-2021-007202.

81. Organization of American States. Impact of the COVID-19 pandemic on refugees and migrants from Venezuela. Evicted persons, indigenous peoples and sex workers in Latin America and the Caribbean migrants from Venezuela. Washington, D.C.: OAS; 2021.

82. United Nations Children's Fund, Latin America and the Caribbean Regional Office. Real-time assessment (RTA) of UNICEF's response to COVID-19 in Latin America and the Caribbean. Panama: UNICEF; 2021 [cited 29 May 2022]. Available from: https://www.unicef.org/lac/media/33706/file/Regional-rta-report-lacro-def.pdf.

83. Economic Commission for Latin America and the Caribbean, International Labour Organization. Employment situation in Latin America and the Caribbean: Decent work for platform workers in Latin America. Santiago: ECLAC; 2021. Available from: https://repositorio.cepal.org/bitstream/handle/11362/46956/1/S2100276_en.pdf.

84. Stampini M, Ibarrarán P, Rivas C, Robles M. Adaptive, but not by design: cash transfers in Latin America and the Caribbean before, during and after the COVID-19 pandemic. Washington D.C.: Inter-American Development Bank; 2021. Available from: https://publications.iadb.org/en/node/31391.

85. Cejudo G, Michel CL, Ramírez DL. Inventario y caracterización de los programas de apoyo al ingreso en América Latina y el Caribe frente a COVID-19. New York: Inter-American Development Bank; 2021. Available from: http://dx.doi.org/10.18235/0003840.

86. Gentilini U, Almenfi M, Blomquist J, Dale P, Giuffra F, Desai V, et al. Social protection and jobs responses to COVID-19: A real-time review of country measures. Washington, D.C.: World Bank; 2021.

87. Sullivan M, Meyer P. Latin America and the Caribbean: impact of COVID-19. Congressional Research Service; 2022 [cited 28 May 2022]. Available from: https://sgp.fas.org/crs/row/IF11581.pdf.

88. Goldfajn I, Ivanova A, Roldos J. Latin America's strong recovery is losing momentum, underscoring reform needs. IMFBlog. 2022 [cited 28 May 2022]. Available from: https://blogs.imf.org/2022/01/31/latin-americas-strong-recovery-is-losing-momentum- underscoring-reform-needs/.

89. Economic Commission for Latin America and the Caribbean, International Labour Organization. Employment situation in Latin America and the Caribbean: Policies to protect labour relations and hiring subsidies amid the COVID-19 pandemic. Santiago: ECLAC; 2021 [cited 29 May 2022].

90. Economic Commission for Latin America and the Caribbean. Social panorama of Latin America 2021. Santiago: ECLAC; 2022 [cited 19 December 2022]. Available from: https://oig.cepal.org/sites/default/files/social_panorama_latam_2021.pdf.

91. Food and Agriculture Organization of the United Nations. Latin America and the Caribbean –Regional overview of food security and nutrition 2021: Statistics and trends. Rome: FAO; 2021 [cited 28 May 2022]. Available from: https://www.fao.org/documents/card/en/c/cb7497en.

92. World Health Organization. Strategic preparedness and response plan for COVID-19. Geneva: WHO; 2020 [cited 29 May 2022]. Available from: https://www.who.int/docs/default-source/coronaviruse/srp-covid-19-6month.pdf?sfvrsn=a7ac05b1_2&download=true.

93. Pan American Health Organization. COVID-19 pandemic in the Americas. Response Strategy and Donor Appeal. Washington, D.C.: PAHO; 2020. Available from: https://www.paho.org/en/documents/response-covid-19-outbreak-region-americas.

94. Pan American Health Organization. Response to the COVID-19 pandemic in the Americas: response strategy and donor appeal. January–December 2021. Washington, D.C.: PAHO; 2021 [cited 19 December 2022]. Available from: https://iris.paho.org/handle/10665.2/53540.

95. Pan American Health Organization. PAHO delivers 100 million COVAX vaccine doses to Latin America and the Caribbean. Washington, D.C.: PAHO; 2022 [cited 28 May 2022]. Available from: https://www.paho.org/en/news/15-2-2022-paho-delivers-100-million-covax-vaccine-doses-latin-america-and-caribbean.

96. Pan American Health Organization. 170th session of the executive committee. In: 170th session of the executive committee CE170/13. Washington D.C.: PAHO; 2022 [cited 10 December 2022]. Available from: https://www.paho.org/en/governing-bodies/executive-committee/170th-session-executive-committee.

97. Pan American Health Organization. Countries and centers. Washington, D.C.: PAHO; 2022 [cited 19 December 2022]. Available from: https://www.paho.org/en/countries-and-centers.

98. ReBUILD for Resilience. ReBUILD for Resilience—resilience framework. [cited 19 December 2022]. Available from: https://www.rebuildconsortium.com/research-themes/resilience-framework-2/.

99. United Nations Evaluation Group. UNEG norms and standards for evaluation (2016). New York: UNEG; 2016. Available from: http://www.unevaluation.org/document/detail/1914.

100. Vélez CM, Aguilera B, Kapiriri L, Essue BM, Nouvet E, Sandman L, et al. An analysis of how health systems integrated priority-setting in the pandemic planning in a sample of Latin America and the Caribbean countries. Health Res Policy Syst. 2022;20(1):58. Available from: https://health-policy-systems.biomedcentral.com/articles/10.1186/s12961-022-00861-y.

101. United Nations Children's Fund. COVID-19 market dashboard. Statistics. New York: UNICEF; 2022 [cited 10 December 2022]. Available from: https://www.unicef.org/supply/covid-19-market-dashboard.

102. Pan American Health Organization, World Health Organization. Report on strategic issues between PAHO and WHO, 30th Pan American Sanitary Conference, 74th session of the Regional Committee of WHO for the Americas. Washington, D.C.: PAHO; 2022. Available from: https://www.paho.org/sites/default/files/csp30-inf-2-e-strategic-issues-paho-who_0.pdf.

103. Pan American Health Organization. Health in the Americas: Overview of the Region of the Americas in the context of the COVID-19 pandemic. Washington, D.C.: PAHO; 2022 [cited 19 December 2022]. Available from: https://hia.paho.org/en/covid-2022.

104. Pan American Health Organization. Health in the Americas 2022, 30th Pan American Sanitary Conference, 74th Session of the Regional Committee of WHO for the Americas. Washington, D.C.: PAHO; 2022.

105. Laboratorio Etnográfico. Evaluación rápida de barreras de vacunación, en el marco del plan nacional de vacunación contra COVID-19 y la campaña de vacunación del Ministerio de Salud Pública y Asistencia Social—MSPAS de Guatemala. Guatemala: MSPAS; 2022.

106. Pan American Health Organization. Entender la infodemia y la desinformación en la lucha contra la COVID-19. Washington, D.C.: PAHO; 2020 [cited 5 December 2022]. Available from: https://iris.paho.org/bitstream/handle/10665.2/52053/Factsheet-Infodemic_spa.pdf.

107. Pan American Health Organization. Preocupaciones, actitudes y prácticas previstas de los trabajadores de salud con respecto a la vacunación contra la COVID-19 en el Caribe. Washington, D.C.: PAHO; 2021 [cited 5 December 2022]. Available from: https://iris.paho.org/handle/10665.2/55100.

108. World Health Organization. Global surveillance for COVID-19 caused by human infection with COVID-19 virus: interim guidance. Geneva: WHO; 2020. Available from: https://apps.who.int/iris/handle/10665/331506.

109. Pan American Health Organization. Considerations for the implementation and management of contact tracing for coronavirus disease 2019 (COVID-19) in the Region of the Americas. Washington, D.C.; PAHO; 2020 [cited 19 December 2022]. Available from: https://iris.paho.org/handle/10665.2/52384.

110. Pan American Health Organization. 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. Washington, D.C.: PAHO; 2021 [cited 19 December 2022]. Available from: https://iris.paho.org/handle/10665.2/53254.

111. 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. Washington, D.C.; PAHO; 2020. Available from: https://iris.paho.org/handle/10665.2/52407.

112. World Health Organization. Considerations for implementing a risk-based approach to international travel in the context of COVID-19. Geneva: WHO; 2020 [cited 8 December 2022]. Available from: https://apps.who.int/iris/handle/10665/337858.

113. Leite JA, Gresh L, Vicari A, Gabastou JM, Perez E, Aldighieri S, et al. COVID-19 laboratory preparedness and response in the Americas Region: lessons learned. Simuunza MC, editor. PLoS One. 2021;16(6):e0253334. Available from: https://dx.plos.org/10.1371/journal.pone.0253334.

114. Pan American Health Organization. Strategy on regional genomic surveillance for epidemic and pandemic preparedness and response. 30th Pan American Sanitary Conference, 26–30 September 2022. Washington, D.C.: PAHO; 2022 [cited 19 December 2022]. Available from: https://www.paho.org/sites/default/files/csp30-r9-e-regional-genomic-surveillance_0.pdf.

115. Pan American Health Organization. COVID-19 therapeutic options. Virtual Health Library. Washington, D.C.: PAHO; 2022 [cited 19 December 2022]. Available from: https://covid-therapy.bvsalud.org/.

116. World Health Organization Regional Office for Europe. Self-assessment tool for the evaluation of essential public health operations in the WHO European Region. Copenhagen: WHO; 2015 [cited 10 December 2022]. Available from: https://apps.who.int/iris/handle/10665/344398.

117. Pan American Health Organization. Ongoing living update of potential COVID-19 therapeutics options: summary of evidence. Rapid review. Washington, D.C.: PAHO; 2022 [cited 13 December 2022]. Available from: https://iris.paho.org/handle/10665.2/52719.

118. Usher AD. A beautiful idea: how COVAX has fallen short. Lancet. 2021;397(10292):2322–2325. Available from: https://linkinghub.elsevier.com/retrieve/pii/S0140673621013672.

119. Mathieu E, Ritchie H, Ortiz-Ospina E, Roser M, Hasell J, Appel C, et al. A global database of COVID-19 vaccinations. Nat Hum Behav. 2021;5(7):947–953. Available from: https://www.nature.com/articles/s41562-021-01122-8.

120. Pan American Health Organization. Response to the COVID-19 pandemic in the Americas: response strategy and donor appeal. January–December 2021. Washington, D.C.: PAHO; 2021 [cited 19 December 2022]. Available from: https://iris.paho.org/handle/10665.2/53540.

121. Pan American Health Organization. Summary of the status of national immunization programs during the COVID-19 pandemic, July 2020. Washington, D.C.: PAHO; 2020 [cited 10 December 2022]. Available from: https://iris.paho.org/handle/10665.2/52544.

122. Sachs JD, Karim SSA, Aknin L, Allen J, Brosbøl K, Colombo F, et al. The Lancet Commission on lessons for the future from the COVID-19 pandemic. Lancet. 2022;400(10359):1224–1280. Available from: https://doi.org/10.1016/S0140-6736(22)01585-9.

123. World Health Organization. Brazil COVID-19 WHO data. Geneva: WHO; 2022 [cited 19 December 2022]. Available from: https://covid19.who.int/region/amro/country/br.

124. Pan American Health Organization. COVID-19 vaccination in the Americas (dashboard). Washington, D.C.: PAHO; 2023. Available from: https://ais.paho.org/imm/IM_DosisAdmin-Vacunacion.asp.

125. Pan American Health Organization. PAHO COVID-19 Vaccination in the Americas. Washington, D.C.: PAHO; 2022. [cited 29 May 2022]. Available from: https://ais.paho.org/imm/IM_DosisAdmin-Vacunacion.asp.

126. Johns Hopkins University. Map and trends: mortality analyses. Bethesda: Johns Hopkins University; 2022 [cited 19 December 2022]. Available from: https://coronavirus.jhu.edu/data/mortality.

127. Interview data: PAHO country offices. 2022.

128. Interview data: Counterparts. 2022.

129. Pan American Health Organization. COVID-19 PAHO/WHO response. Washington, D.C.: PAHO; 2021 [cited 19 December 2022]. Available from: https://iris.paho.org/handle/10665.2/53236.

130. Pan American Health Organization. Situation report on COVID in the Amazon region of Brazil. Washington, D.C.: PAHO; 2021.

131. Pan American Health Organization. COVID-19 PAHO/WHO response. Washington, D.C.: PAHO; 2021. Available from: https://iris.paho.org/handle/10665.2/53329.

132. Pan American Health Organization. PAHO donates oxygen cylinders, oximeters, thermometers and COVID-19 diagnostic tests to the state of Amazonas and the municipality of Manaus. Washington, D.C.: PAHO; 2021. Available from: https://www.paho.org/en/news/1-2-2021-paho-donates-oxygen-cylinders-oximeters-thermometers-and-covid-19-diagnostic-tests.

133. Pan American Health Organization. Preparação, prevenção e controle da COVID-19 em presídios e outros locais de detenção. Orientação provisória. Washington, D.C.: PAHO; 2021 [cited 19 December 2022]. Available from: https://iris.paho.org/handle/10665.2/54502.

134. World Health Organization. Barbados COVID-19 WHO data. Geneva: WHO; 2022 [cited 19 December 2022]. Available from: https://covid19.who.int/region/amro/country/bb.

135. Pan American Health Organization. Barbados – An example of government leadership and regional cooperation in containing the COVID-19 virus. Geneva: WHO; 2020 [cited 19 December 2022]. Available from: https://www.paho.org/en/documents/barbados-example-government-leadership-and-regional-cooperation-containing-covid-19-virus.

136. Pan American Health Organization. Concerns, attitudes, and intended practices of healthcare workers toward COVID-19 vaccination in the Caribbean. Washington, D.C.: PAHO; 2021.

137. Mathieu E, Ritchie H, Rodés-Guirao L, Appel C, Giattino C, Hasell J, et al. Coronavirus pandemic (COVID-19). Oxford: Our World in Data; 2020. Available from: https://ourworldindata.org/covid-vaccinations#what-share-of-the-population-has- completed-the-initial-vaccination-protocol.

138. American Society/Council of the Americas. Guatemala. 2022 [cited 19 December 2022]. Available from: https://www.as-coa.org/region/guatemala.

139. Economic Commission for Latin America and the Caribbean. COVID-19 Observatory in Latin America and the Caribbean. Santiago: ECLAC; 2021 [cited 19 December 2022]. Available from: https://statistics.cepal.org/forms/covid-countrysheet/index.html?country=GTM.

140. Centers for Disease Control and Prevention. Cholera in Haiti. Atlanta: CDC; 2022 [cited 19 December 2022]. Available from: https://www.cdc.gov/cholera/haiti/index.html.

141. Moloney A. 'Perfect storm': Haiti COVID-19 peak set to collide with hurricanes. Reuters; 2020 [cited 19 December 2022]. Available from: https://www.reuters.com/article/us-health-coronavirus- haiti-hurricane-an-idUSKBN22R1BB.

142. Interview data: Counterparts.

143. Interview data: PAHO country offices.

144. Mathieu E, Ritchie H, Rodés-Guirao L, Appel C, Giattino C, Hasell J, et al. Coronavirus pandemic (COVID-19). Oxford: Our World in Data; 2020. Available from: https://ourworldindata.org/covid-vaccinations#what-share-of-the-population-has- completed-the-initial-vaccination-protocol.

145. Haldane V, de Foo C, Abdalla SM. Health systems resilience in managing the COVID-19 pandemic: lessons from 28 countries. Nat Med. 2021;27:964–980. Available from: https://www.nature.com/articles/s41591-021-01381-y.

146. Sanchez-Talanquer M, González-Pier E, Sepúlveda J, Abascal-Miguel L, Fieldhouse J, del Rio C, et al. La respuesta de México al COVID-19: estudio de caso. San Francisco: UCSF Institute for Global Health Sciences; 2021. Available from: https://globalhealthsciences.ucsf.edu/sites/globalhealthsciences.ucsf.edu/files/la_respuesta_de_mexico_al_covid_esp.pdf.

147. Pan American Health Organization. Pan American Health Organization response to COVID-19 up to 31 December 2021. Washington, D.C.: PAHO; 2022. Available from: https://iris.paho.org/handle/10665.2/56162.

148. World Food Programme. Contención de la propagación de la COVID-19 en la región Áncash mediante el fortalecimiento del primer nivel de atención, rastreo de contactos y asistencia alimentaria (mayo a noviembre 2020). [Rome]: WFP; 2021.

149. Pan American Health Organization. Peru is among the first countries in the Americas to receive COVAX vaccines. Washington, D.C.: PAHO; 2021. Available from: https://www.paho.org/en/news/11-3-2021-peru-among-first-countries-americas-receive-covax-vaccines.

This document is the companion publication to *Evaluation of the Pan American Health Organization Response to COVID-19 2020–2022. Volume I Final Report*, which reflects the findings that covered the period from January 2020 to August 2022. It provides information on PAHO's support to its Member States in accordance with the World Health Organization COVID-19 Strategic Preparedness and Response Plan. The data collected during the evaluation were consolidated and analyzed at strategic, organizational, and operational levels. It focuses on PAHO as an organization, and while it does not assess Member States' responses to the pandemic, it provides information on how PAHO collaborated with and supported Member States during the response.

In addition to presenting information related to the COVID-19 pandemic in the Americas and PAHO's programmatic response, the report provides information on key achievements, on the enabling and limiting factors, gaps, and lessons that have emerged from PAHO's response to the COVID-19 pandemic, which serve to inform preparedness for and response to future public health emergencies. Finally, evidence-based recommendations are provided for corrective actions to strengthen future pandemic responses, while building a resilient recovery in the Region. These recommendations are focused on PAHO's governance and management, specialized regional mechanisms, diversified funding models, and use of new technologies.

PAHO
Pan American Health Organization
World Health Organization
REGIONAL OFFICE FOR THE Americas
www.paho.org

9 789275 127476