Third round of the National Survey on the Continuity of Essential Health Services during the COVID-19 Pandemic: November–December 2021

Interim report for the Region of the Americas, January 2022
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SUMMARY OF FINDINGS

• The Pan American Health Organization (PAHO) has been supporting the implementation of the tools of the World Health Organization (WHO) for tracking disruptions to essential health services in the context of the COVID-19 pandemic in the Region of the Americas. PAHO has conducted three rounds of WHO’s global pulse survey on continuity of essential health services during the COVID-19 pandemic in 2020 and 2021 to assess the extent of these disruptions.

Disruptions to essential health services

• Two years into the pandemic, nearly all countries in the Region of the Americas continue to report disruptions to essential health services, with 93% of the 28 countries and territories participating in the third round of the survey reporting disruptions of at least one health service during the preceding six months from the date of survey submission (June–November 2021), which was similar to what was reported in Q1 2021 and Q3 2020 (94% and 97%, respectively).

• There are disruptions across all health service delivery platforms, with first level of care, rehabilitative and palliative care, and community-based care services among the most affected: 70% of the 20 responding countries reported disruptions at the first level of care, which affects access to first-contact services, especially for the most vulnerable populations.

• More countries are reporting disruptions for potentially life-saving emergency, critical, and operative care, which can have a substantial impact on health outcomes in the short term, with 39% of countries reporting disruptions in 24-hour emergency room services and 38% in ambulance services.

• Substantial disruptions in elective surgeries and continuing care were also reported, with 81% of 16 countries reporting disruptions in elective surgeries, and a third reporting severe disruptions (more than 50% of users not being served as usual); 72% of 18 countries are reporting disruptions in rehabilitative services, and 69% of 13 countries in palliative care services.

• Countries continue to report disruptions across all major tracer service areas, ranging from about one third of countries reporting disruptions to sexual, reproductive, maternal, newborn, child, and adolescent health to over half of countries reporting disruptions to immunization, care for older people, and cancer care (see Annex 1).

• Even as COVID-19 vaccination has been scaled up, severe disruptions in routine immunization services have increased, with 29% of countries reporting severe disruptions (more than 50% of users not being served as usual) compared with 11% of countries reporting severe disruptions in Q1 2021.

• The magnitude and extent of disruptions reported by 18 countries responding to all three rounds of the survey was similar between Q1 2021 and Q4 2021, with important exceptions. In Q4 2021, 69% of 13 countries reported disruptions in cancer care, up from 38% in Q1 2021. Similarly, severe disruptions for mental, neurological, and substance use disorders increased from 9% in Q1 2021 to 17% of 12 countries in Q4 2021.

• A mix of demand- and supply-side factors were responsible for disruption to services across major service delivery channels, including lack of resources (34% of countries), intentional service delivery modifications (34% of countries), and decreased care seeking (32% of countries). Disruptions in the supply chain system were reported by 59% of countries.
Health systems and services responsiveness

- About three quarters of countries (74% of 19 countries) have plans in place for continuity of essential health services during the COVID-19 pandemic; however, just over a quarter (28% of 18 countries) have plans in place for building longer-term health service resilience and preparedness, with another 55% planning to develop a recovery plan. Some 59% of 17 countries have allocated additional funding for longer-term health system recovery and/or health service resilience and preparedness.

- All countries in the Region of the Americas are implementing action to mitigate disruptions in service delivery and promote service recovery, including recruitment of additional health personnel and redistribution of tasks and optimization of roles (84% of countries), procurement of surge commodities (84% of countries), community communications (80% of countries), and provision of home-based care and telemedicine (67% of countries). In addition, 75% of countries are using existing networks to reach vulnerable groups, and 70% are using proactive strategies to reach groups in situations of vulnerability.

- Most countries have introduced intentional strategic changes in the service delivery platforms and public health services to mitigate the collapse of health systems, with more than half of the countries having limited or suspended outpatient specialist services (79% of 19 countries), mobile clinics (63% of 16 countries), community-based care (58% of 19 countries), and primary care services (53% of 19 countries). These policy measures were similar to Q1 2021, although outpatient services, mobile clinics, and community-based care show higher levels of modification compared to Q1 2021.

Bottlenecks to access essential COVID-19 tools

- Most countries in the Region of the Americas are facing critical challenges to scaling up access to essential COVID-19 tools, with 90% of 18 countries reporting at least one bottleneck to COVID-19 diagnostics, therapeutics, vaccination, and personal protection equipment (PPE) access. Health workforce challenges were reported by 60% of countries for therapeutics and 50% for diagnostics and testing, while shortages in supply and equipment were reported by 50% of 20 countries for diagnostics and testing.

- Demand-side challenges are the most common bottlenecks to scaling up COVID-19 vaccination, reported by 45% of 20 countries. These include community acceptance and affordability. In addition, health workforce challenges were reported by 35% of countries to scaling up COVID-19 vaccination.

- The most cited technical support needs identified by countries are health worker recruitment, retention and training, surge procurement, financial planning, and risk communication and community engagement. These areas are also a focus of frequently reported strategies being used to overcome service disruptions.
Conclusions

- **Survey results suggest that COVID-19 continues to disrupt essential health services in almost all countries across the Region of the Americas and in all priority health areas and delivery platforms.** Notably, the magnitude and extent of disruptions in the delivery of essential health services have not substantially improved since Q1 2020, even though countries have intensified efforts to respond to health systems bottlenecks and barriers to access that have been exacerbated by the COVID-19 pandemic.

- **In addition to struggling to maintain essential health services, most countries in the Region are facing critical challenges to scaling up access to essential COVID-19 tools,** including diagnostics and testing, therapeutics, PPE distribution and use, and vaccination. The main bottlenecks relate to health workforce availability and distribution, shortages in supply and equipment, and community demand-side challenges.

- **Countries in the Region are beginning to plan for post-pandemic recovery and beyond,** devising strategies for building longer-term health service resilience and preparedness. While the relative importance and configuration adopted will depend on the specific country context, survey results reinforce the need for stronger public health capacities to ensure sustained performance of the health system and effective response to future health emergencies.

- **Bottlenecks identified in the survey emphasize the need for more human resources for health who have the competencies necessary for their roles and are well supported and protected.** There are also required efforts to continue increasing capacity and adapting care pathways for both COVID-19 and non-COVID-19 patients, and community-based and health promotion strategies to address demand-side challenges. As far as possible, additional resources are needed to sustain and expand the delivery of essential services, prioritizing the first level of care. More efforts are needed to evaluate and learn the best strategies for overcoming barriers and bottlenecks to scale up essential COVID-19 and non-COVID-19 services and building longer-term health system resilience.

- **PAHO/WHO will continue to support countries in strengthening their health systems to overcome challenges during and beyond the COVID-19 pandemic.**
INTRODUCTION

The coronavirus disease 2019 (COVID-19) pandemic continues to expose the limitations of health systems across the Region of the Americas, and globally. COVID-19 vaccination programs have been rolled out in most countries, but concerns remain in terms of production, delivery, and equitable access (1). At the same time, new outbreaks and variants continue to emerge (2). Health systems are therefore still facing a dual burden as they strive to ensure the continuity of essential health services while combating the COVID-19 pandemic. Changes in care provision to meet increased demand for COVID-19 care have challenged local and national capacities to maintain access to essential health services across all priority areas in most countries of the Region (3).

In this context, the World Health Organization (WHO) developed the global pulse survey on continuity of essential health services during the COVID-19 pandemic to help monitor and manage the extent of the disruptions to essential health services caused by the COVID-19 pandemic (4). The Pan American Health Organization (PAHO) has been supporting the implementation of the survey in the countries of the Region (3). The three rounds of the survey provide an opportunity to assess how the pandemic’s impact has evolved over time regarding disruptions and rebounds in services and responses, mitigation strategies, and bottlenecks to the implementation of COVID-19 essential tools.

By providing a rapid overview of the situation, the survey results can support decision-makers in taking stock of current challenges, and can be used as a basis for planning processes and resource allocation. The results are also used to support actions to mitigate the impact of the pandemic implemented by PAHO’s Incident Management Support Team (IMST) (5), as well as the actions of the Access to COVID-19 Tools (ACT) Accelerator, specifically those in the Health Systems Connector pillar (6).

During November–December 2021 the third round of the survey was launched, in which 223 countries, territories, and areas were invited to respond to a standardized web-based survey. This report presents the results of the third round of the survey for the countries in the Region of the Americas. It also includes an assessment of trends over time in the continuation of essential health services, where feasible. To ensure coherence and harmonization, this report adopts the structure and content of the WHO global report on the results of the third round of the survey (4).
METHODS

1.1 Instrument

The second round of the national survey on the continuity of essential health services during the COVID-19 pandemic

The third round of the pulse survey consisted of open-ended and multiple-choice questions about the current national policies, plans, and structures, disruption of health services, reasons for disruptions, mitigation strategies, monitoring information, and countries’ priority needs.

Across all survey sections, a total of 66 services were assessed. Across service delivery channels, the survey included services for primary care, emergency, critical, and operative care; rehabilitative and palliative care; and community care. Across health service areas, the survey included services for sexual, reproductive, maternal, newborn, child, and adolescent health (SRMNCAH); nutrition; care for older people; immunization; communicable diseases; neglected tropical diseases (NTDs); and mental, neurological, and substance use (MNS) disorders. A list of these services is included in Annex 2. The survey round did not include a section on noncommunicable diseases because a separate WHO survey with comparable data has recently been conducted.

Table 1 shows the survey sections and the suggested key informants. The full questionnaire is contained in the document entitled “Third round of the national pulse survey on continuity of essential health services during the COVID-19 pandemic: November-December 2021” (4).

Table 1. Survey sections and key informants

<table>
<thead>
<tr>
<th>#</th>
<th>Survey sections</th>
<th>Suggested key informants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Module on the continuity of essential health services</td>
<td>Health system, service delivery, or essential health services incident management system team coordinators</td>
</tr>
<tr>
<td></td>
<td>1. Policy, planning, and investment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Service interruptions on all service delivery platforms</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Service delivery platforms</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Mitigation strategies and recovery measures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Information tracking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Health system bottlenecks and priority needs to support the delivery of essential health services:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>· Essential health services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>· Essential tools for COVID-19</td>
<td></td>
</tr>
</tbody>
</table>

In-depth modules on the interruptions of the service areas of the tracers

<table>
<thead>
<tr>
<th>#</th>
<th>Survey sections</th>
<th>Suggested key informants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Sexual, reproductive, maternal, neonatal, infant, child, and adolescent health</td>
<td>Sexual, reproductive, maternal, neonatal, infant, child, and adolescent health focal center(s)</td>
</tr>
<tr>
<td>3</td>
<td>Nutrition</td>
<td>Nutrition focal point(s)</td>
</tr>
<tr>
<td>4</td>
<td>Immunization</td>
<td>Immunization coordination center(s)</td>
</tr>
<tr>
<td>5</td>
<td>Human immunodeficiency virus and hepatitis</td>
<td>Human immunodeficiency virus and hepatitis focal point(s)</td>
</tr>
<tr>
<td>6</td>
<td>Tuberculosis</td>
<td>Tuberculosis focal point(s)</td>
</tr>
<tr>
<td>7</td>
<td>Malaria</td>
<td>Malaria focal point(s)</td>
</tr>
</tbody>
</table>
Based on lessons learned from previous rounds, the third round of the survey modified the questions related to the disruption of specific services. The number of services expanded from 44 in round 1 to 63 in round 2 and 66 in round 3. The ordinal response categories for the questions on service disruptions increased from a three-point ordinal scale in round 1 (more than 50% of users not served as usual; 5%–50% of users not served as usual; and less than 5% of users not served as usual) to a four-point scale in rounds 2 and 3 (more than 50%, 26%–50%, 5%–25%, and less than 5%). In all survey rounds, respondents could respond “Do not know” if information was not/not yet available on that service’s disruption, or “Not applicable” if the service/intervention is not usually delivered in the country.

Between the first survey,1 second (World Health Organization, 2021), and third survey rounds, there were 28 tracer services that can be used to compare trends over time. The trend analyses for service disruptions were limited to the same 95 countries with data for all three rounds.

1.2 Process for completion

Information was collected for the third round of the survey through collaboration between WHO and PAHO. The survey was distributed in a secure manner to PAHO officials in the Region’s countries through a web-based questionnaire published using LimeSurvey software, together with instructions on how to respond correctly. The questionnaire was translated into Arabic, Chinese, English, French, Portuguese, Russian, and Spanish to facilitate implementation.

To ensure completion of the survey, it was recommended that a country coordinator be designated, with the following functions:

1. Identify the health authority coordinators or key informants who should complete each survey section.
2. Send the survey link to the health authority coordinators or key informants.
3. Follow up on the response to each survey section.

It was also recommended that following survey submissions, the health authority coordinator should organize a meeting with key informants to examine the level of disruption present in the health system and its implications, identify the main challenges, and identify the most effective mitigation strategies for maintaining the continuity of essential health services while responding to the COVID-19 pandemic.

1.3 Data-sharing agreement

Before key informants responded to any survey section, they were asked to review the WHO data-sharing agreement and to communicate by email if they wanted to opt out. Consequently, the results for countries that chose to opt out of this agreement are reported only in the consolidated results at the global or regional level.

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1 Including the Pulse survey on continuity of essential health services during the COVID-19 pandemic; The impact of the COVID-19 pandemic on noncommunicable disease resources and services; results of a rapid assessment; and The impact of COVID-19 on mental, neurological and substance use services.
1.4 Responses

The survey was sent to 54 countries and territories in the Region of the Americas, of which 28 (52%) responded, which was similar to round 2 (54% [29 of 52]). Of the 28, 11 countries responded to all survey sections that they considered relevant to their context. Table 2 presents regional response rates and Annex 3 lists the responding countries and territories for the Region of the Americas.

Table 2. Response rate for the Region of the Americas

<table>
<thead>
<tr>
<th>Overall Response Rate</th>
<th>11/54 (20%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>At least one survey section</td>
<td>28/54 (56%)</td>
</tr>
<tr>
<td>Section 1. Continuity of EHS</td>
<td>20/54 (37%)</td>
</tr>
<tr>
<td>Section 2. SRMNCAH</td>
<td>21/54 (39%)</td>
</tr>
<tr>
<td>Section 3. Nutrition</td>
<td>21/54 (39%)</td>
</tr>
<tr>
<td>Section 4. Immunization</td>
<td>19/54 (35%)</td>
</tr>
<tr>
<td>Section 5. HIV/hepatitis</td>
<td>19/54 (35%)</td>
</tr>
<tr>
<td>Section 6. TB</td>
<td>17/54 (31%)</td>
</tr>
<tr>
<td>Section 7. Malaria (where relevant)</td>
<td>9/18 (50%)</td>
</tr>
<tr>
<td>Section 8. NTDs (where relevant)</td>
<td>13/31 (42%)</td>
</tr>
<tr>
<td>Section 9. MNS</td>
<td>19/54 (35%)</td>
</tr>
<tr>
<td>Section 10. Care for older people</td>
<td>13/54 (24%)</td>
</tr>
</tbody>
</table>

Note: The percentages are calculated by dividing the number of countries that responded to each section among the 54 countries and territories in the Region of the Americas that received the second round of the survey. In the sections on malaria and neglected tropical diseases (NTDs), the denominator is different because these problems are not relevant to all countries and territories. In the malaria section, the percentage is calculated out of 18 countries, and in the NTDs section, out of 31 countries.

Most survey responses were received during November–December 2021. The reporting period of the survey refers to the six-month period preceding the month of survey completion. We assumed Round 3 corresponds with Q4 2021, Round 2 with Q1 2021, and Round 1 with Q3 2020.

Most responses were submitted through the online portal. A few responses were received by email and were then entered into the online platform by the technical team at WHO headquarters. Data from the questionnaire were downloaded directly from the web-based platform to a Microsoft Excel database for analysis. The analysis presented in this report is based on unweighted country and territory data. In both survey rounds, “Do not know” and “Not applicable” responses were excluded from the denominators in analyses, unless considered pertinent.
1.5 Limitations

The limitations of the survey should be considered when interpreting the results. In general, the responses provided by the key informants reflect their own knowledge and opinions, which may be prone to bias and lack validation by other actors in the country. Their responses may also not necessarily reflect the situation at subnational levels and the variability that exists within countries.

The type and mix of respondents and method of survey completion also varied across countries, territories, and technical areas. Respondents included health policy advisors, directors of health services and health systems, directors of programs, monitoring and evaluation focal points, public health officers, health systems and services officers, and incident management team focal points. No details on type of respondents were gathered. Coordination between Ministry of Health focal points prior to submission also varied; in some cases, key informants submitted survey responses individually, and in other cases survey section responses were reviewed and validated through a cross-cutting consultation prior to submission.

The reference period in Round 3 covers six months rather than the three months in the previous rounds. This means that the level of disruption can be overestimated in comparison to Round 1 and 2. At the same time, it is also likely that the countries and territories that were unable to participate in the survey experienced severe pandemic impacts, thereby underestimating the overall level of disruptions. As countries were also at different stages of the COVID-19 pandemic when they responded to the survey, it is expected that variations will be found when making comparisons.

Countries and territories responded to different combinations of sections within the survey. Therefore, each survey section has a different denominator, which introduces a potential bias in the overall comparison of the results between rounds and health service areas. The novelty of the concepts and terminology related to essential health services, service continuity, and mitigation strategies may also have led respondents to interpret the terms in different ways, which could influence the results. The original survey was designed in English and subsequently translated into several languages, which may have introduced biases in the interpretation of terminology.
RESULTS

2.1 Disruptions to essential health services

Disruption in the delivery of essential health services remains widespread throughout the Region of the Americas. Almost all participating countries (93% of 27 countries) reported disruptions of at least one health service, which was similar to previous rounds (94% and 97% in Rounds 1 and 2, respectively). Figure 1 presents the results for the level of disruption for the 66 essential health services evaluated in Round 3. On average, 55% of the 66 services evaluated had some level of disruption: 18.3% had mild disruption (5%–25% of users were not served as usual), 17.1% had moderate disruption (26%–50% of users were not served as usual), and 19.7% had severe disruption (more than 50% of users were not served as usual).

Figure 1. Percentage of services disrupted, by country (number of essential services = 66)

Note: The denominator represents responses from countries/territories that responded to at least one survey section and consented to data-sharing agreement. Services include 66 services from the following areas: primary care, emergency, critical and operative care, rehabilitation, palliative care, cancer care, community care, and tracer services for reproductive, maternal, newborn, child, and adolescent health and nutrition, immunization, communicable diseases, neglected tropical diseases, mental, neurological, and substance use disorders, and care for older people. For codes assigned to countries, see https://unstats.un.org/unsd/methodology/m49/.
Trend analyses conducted for 28 services in 19 countries that responded to all three survey rounds show that the magnitude of disruptions remains somewhat similar to that reported in previous rounds (Table 3).

**Table 3. Level of service disruption across 28 tracer services in 19 countries submitting data to all three rounds**

<table>
<thead>
<tr>
<th></th>
<th>Q3 2020 (Round 1)</th>
<th>Q1 2021 (Round 2)</th>
<th>Q4 2021 (Round 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average disruption</td>
<td>41%</td>
<td>48%</td>
<td>54%</td>
</tr>
<tr>
<td>75%–100% disruption</td>
<td>21%</td>
<td>21%</td>
<td>26%</td>
</tr>
<tr>
<td>50%–74% disruption</td>
<td>26%</td>
<td>32%</td>
<td>37%</td>
</tr>
<tr>
<td>25%–49% disruption</td>
<td>11%</td>
<td>26%</td>
<td>16%</td>
</tr>
<tr>
<td>Less than 25% disruption</td>
<td>16%</td>
<td>16%</td>
<td>11%</td>
</tr>
<tr>
<td>No disruption</td>
<td>26%</td>
<td>5%</td>
<td>11%</td>
</tr>
</tbody>
</table>

*Note: The denominator represents responses from countries/territories that responded to all three survey rounds and consented to data-sharing agreement. Cumulative percentages may not add up to exactly 100% due to rounding. Services include primary care, emergency, critical and operative care, rehabilitation, palliative care, cancer care, community care, and tracer services for reproductive, maternal, newborn, child, and adolescent health and nutrition, immunization, communicable diseases, neglected tropical diseases, mental, neurological, and substance use disorders, and care for older people.*

The level of disruption in the delivery of services affected by the COVID-19 pandemic was somewhat different across countries. When looking at country income groups, high-income countries generally reported fewer services disrupted compared with countries in other income groups, although there was not a clear association due to the variability in the number of countries included in each group (Figure 2).

**Figure 2. Percentage of services disrupted, by income group (number of countries = 27)**
Figure 3 presents an association between the percentage of services disrupted and the cumulative number of deaths due to COVID-19 per 100,000 persons in each country. Compared with the previous round, there was no clear association with COVID-19 death counts per 100,000 population during the six months preceding the survey. However, it is necessary to analyze additional information to understand this potential relationship, given that there are other factors, such as the government’s pandemic response, that could affect the analysis.

**Figure 3.** Cumulative COVID-19 deaths between June–November 2021 per 100,000 population compared to percentage of services disrupted in country (n=27)

Correlation between the level of disruption and the Oxford stringency index, which is based on a range of COVID-19 restriction measures imposed by each country, shows that countries with a stricter response generally reported fewer services disrupted compared with other countries lower in the index.

It is important to note that the index simply records the strictness of the government policies and does not measure or imply appropriateness or effectiveness of a country’s response.

**Figure 4.** Mean stringency index compared with percentage of services disrupted in country (n=23)

*Note: Data on the Oxford government response stringency index were downloaded from Our World in Data. The stringency index is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100=strictest response).*
2.2 Disruptions across service delivery settings and platforms

All health care settings and service delivery platforms were affected, particularly first-contact services (Figure 5). First level of care services had the highest percentage of disruption (70% of 20 countries), followed by rehabilitative and palliative care services (70% of 20 countries). The results show concerning increases reported in disruptions to emergency care, first level of care, and elective survey compared with the previous round in countries that participated in all three rounds (Figure 6).

Figure 5. Disruptions in the provision of integrated health services, by channel (n=20)

<table>
<thead>
<tr>
<th>Service Description</th>
<th>Percentage of Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average Disruption of Primary Care</strong></td>
<td></td>
</tr>
<tr>
<td>Unscheduled primary care clinic services (n=18)</td>
<td>41% 22% 7% 70%</td>
</tr>
<tr>
<td>Routine scheduled primary care clinic services (n=18)</td>
<td>39% 28% 6% 72%</td>
</tr>
<tr>
<td>Prescription renewals for chronic medications (n=18)</td>
<td>33% 22% 11% 67%</td>
</tr>
<tr>
<td><strong>Average Disruption of Emergency, Critical, and Operative Care</strong></td>
<td></td>
</tr>
<tr>
<td>Elective surgeries (n=16)</td>
<td>21% 9% 15% 45%</td>
</tr>
<tr>
<td>Ambulance services (n=16)</td>
<td>25% 6% 5% 38%</td>
</tr>
<tr>
<td>24-hour emergency room/unit services (n=18)</td>
<td>28% 0% 11% 39%</td>
</tr>
<tr>
<td>Emergency surgeries (n=17)</td>
<td>6% 6% 12% 24%</td>
</tr>
<tr>
<td><strong>Average Disruption of Rehabilitative and Palliative Care</strong></td>
<td></td>
</tr>
<tr>
<td>Rehabilitative services (n=17)</td>
<td>40% 17% 14% 70%</td>
</tr>
<tr>
<td>Palliative services (n=13)</td>
<td>41% 18% 12% 71%</td>
</tr>
<tr>
<td><strong>Average Disruption of Community Care</strong></td>
<td></td>
</tr>
<tr>
<td>Outreach services (n=14)</td>
<td>24% 10% 35% 68%</td>
</tr>
<tr>
<td>Health post and home visits by CHWs (n=18)</td>
<td>14% 14% 36% 64%</td>
</tr>
<tr>
<td>Appointments with specialists (n=18)</td>
<td>33% 6% 33% 72%</td>
</tr>
<tr>
<td>Hospital inpatient services (n=16)</td>
<td>25% 6% 19% 50%</td>
</tr>
</tbody>
</table>

Note: The n value represents the number of countries that answered the questions for each service in both rounds. The total percentage may differ from the sum of the partial percentages due to rounding.
RESULTS

Figure 6. Comparison of disruptions by setting in Rounds 1, 2, and 3 (Q3 2020, Q1 2021, and Q4 2021, respectively) in 19 countries responding to all three survey rounds

Under first level of care services, routinely scheduled appointments and unscheduled first level of care appointments were disrupted in 72% of 18 countries. Prescription renewals for chronic medications were disrupted in 67% of 18 countries. Community services, including outreach services, were disrupted in 68% of 18 countries (see Figure 5). This situation is alarming, given that first level of care services play a fundamental role in ensuring the good performance of health systems: they provide first-contact care that is accessible, continuous, comprehensive and coordinated, and focused on people and communities. Strengthening the response capacity of the first level of care is central to achieving universal access to health and universal health coverage. Disruptions in the provision of these services can have serious consequences throughout the system, as well as on people’s overall health and well-being.

Another major concern is disruptions in the delivery of life-saving services, such as emergency, intensive care, and surgical services since any disruption to these services could have serious indirect consequences on short-term health outcomes. The largest disruptions were observed in elective surgical interventions: 81% of 16 countries reported some level of disruption, with a third reporting severe disruption. This was followed by 24-hour emergency room/unit services (39% of 18 countries) and ambulance services (38% of 16 countries).

Substantial disruptions in continuing care services were also reported. About two thirds of countries (72% of 18 countries) reported disruptions in rehabilitative services, and 69% of 13 countries reported disruptions to palliative care services.

2.3 Disruptions to tracer services

To further examine the extent of disruptions in essential health services, key informants provided information on the level of disruption for specific areas: immunization (69% of 15 countries); care for older people (67% of 12 countries); cancer care (67% of 17 countries); nutrition (64% of 13 countries); neglected tropical diseases (53% of 10 countries); mental, neurological, and substance use disorders (47% of 14 countries); communicable diseases (38% of 11 countries); and sexual, reproductive, maternal, newborn, child, and adolescent health (32% of 15 countries).
The magnitude of disruption is similar to the previous round, with important exceptions. Among countries that participated in all three rounds, 69% of 13 countries reported disruptions in cancer care, up from 38% in round 2 and 36% in Round 1. The number of countries reporting severe disruptions for immunization (more than 50% of services disrupted) increased from 11% in round 2 to 29% of 11 countries in Round 3. Similarly, severe disruptions for mental, neurological, and substance use disorders increased from 9% in round 2 to 17% of 12 countries in Round 3 (Figure 7).

Details on the results for tracer services in each of the major health areas are provided in Annex 1.

**Figure 7.** Comparison of disruptions by tracer services in countries that responded to all three survey rounds: Q3 2020 (Round 1), Q1 2021 (Round 2), and Q4 2021 (Round 3)

*Note: The n value represents the number of countries that answered the questions for each service. The total percentage may differ from the sum of the partial percentages due to rounding.*
2.4 Reasons for service disruptions

Figure 8 shows the distribution of reasons for the disruptions in the delivery of essential health services. These relate to intentional service delivery modifications such as closures or postponing of services (34% of countries) and lack of health care resources (34% of countries), and decreased care seeking, particularly for first level of care services (32% of countries).

**Figure 8. Percentage distribution of countries that reported reasons for service disruption (n=25)**

Supply chain systems are critical to ensuring that the necessary health products are available in the adequate quantities to deliver essential health services. Consequently, disruptions in these systems may limit the continuity of services. Disruption in the supply chain system were reported by 59% of countries. Comparing responses over time for all countries responding to any round shows that more countries reported disruptions in the supply chain in Round 3 (Figure 9).

**Figure 9. Percentage of countries reporting disruptions to supply chain system**
3.1 Strategic modifications to service delivery and essential public health functions

Countries in the Region of the Americas have responded in different ways to COVID-19 surges. One strategy has been to introduce intentional strategic changes in the service delivery platforms and public health services. This strategy seeks to mitigate the collapse of health systems. More than half of the countries limited or suspended outpatient specialist services (79% of 19 countries), mobile clinics (63% of 16 countries), community-based care (58% of 19 countries), and primary care services (53% of 19 countries) (Figure 10). These policy measures were similar to Q1 2021, although outpatient services, mobile clinics, and community-based care show higher levels of modification compared with Q1 2021 (Figure 11).

**Figure 10. Government policies in relation to service delivery platforms**

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Suspended</th>
<th>Limited</th>
<th>Functioning as normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile clinics (n=16)</td>
<td>19%</td>
<td>44%</td>
<td>38%</td>
</tr>
<tr>
<td>Community-based care (n=19)</td>
<td>5%</td>
<td>53%</td>
<td>42%</td>
</tr>
<tr>
<td>Prehospital emergency care services (n=19)</td>
<td>21%</td>
<td>79%</td>
<td></td>
</tr>
<tr>
<td>Emergency unit services (n=19)</td>
<td>26%</td>
<td>74%</td>
<td></td>
</tr>
<tr>
<td>Inpatient services (n=19)</td>
<td>58%</td>
<td>42%</td>
<td></td>
</tr>
<tr>
<td>Outpatient specialist services (n=19)</td>
<td>5%</td>
<td>74%</td>
<td>21%</td>
</tr>
<tr>
<td>Primary care services (including family medicine) (n=19)</td>
<td>53%</td>
<td>47%</td>
<td></td>
</tr>
</tbody>
</table>

*Note: The n value represents the number of countries that answered the questions for each service. The total percentage may differ from the sum of the partial percentages due to rounding.*
Scaling back on essential public health functions was also common: 50% or more of countries have limited or suspended population-based disease prevention (14 of 19 countries), health promotion (13 of 19 countries), communication and social mobilization (11 of 19 countries), and public health research activities (9 of 16 countries) (Figure 12). There has been an increase in scaling back of disease prevention and health promotion population-based activities in Q4 2021 compared to Q1 2021 (Figure 13).
**Figure 12.** Government policies in relation to essential public health functions (n=19)

- Disease prevention population-based activities (n=19): 74% Limited, 4% Suspended
- Health promotion population-based activities (n=19): 68% Limited, 8% Suspended
- Public health research (n=16): 50% Limited, 5% Suspended
- Communications and social mobilization activities for health (n=19): 58% Limited, 8% Suspended
- Health protection population-based activities (n=16): 38% Limited, 4% Suspended
- Surveillance and response (n=19): 32% Limited, 2% Suspended
- Emergency preparedness and response (n=19): 26% Limited, 2% Suspended

**Figure 13.** Round 3 comparison: percentage of countries that limited or suspended essential public health functions/activity

- Disease prevention population-based activities:
  - Q1 2021: 60% Limited, 4% Suspended
  - Q4 2021: 74% Limited, 4% Suspended
- Health promotion population-based activities:
  - Q1 2021: 44% Limited, 8% Suspended
  - Q4 2021: 68% Limited, 8% Suspended
- Public health research:
  - Q1 2021: 55% Limited, 5% Suspended
  - Q4 2021: 50% Limited, 5% Suspended
- Communications and social mobilization activities for health:
  - Q1 2021: 33% Limited, 8% Suspended
  - Q4 2021: 58% Limited, 8% Suspended
- Health protection population-based activities:
  - Q1 2021: 58% Limited, 4% Suspended
  - Q4 2021: 58% Limited, 4% Suspended
- Surveillance and response:
  - Q1 2021: 25% Limited, 2% Suspended
  - Q4 2021: 32% Limited, 2% Suspended
- Emergency preparedness and response:
  - Q1 2021: 21% Limited, 2% Suspended
  - Q4 2021: 26% Limited, 2% Suspended
3.2 Mitigation strategies to overcome service disruption

All countries in the Region of the Americas report actions to mitigate disruptions in service delivery and promote service recovery, such as recruitment of health workers, procurement of commodities, and community engagement and communication (Figure 14). The most frequently reported approaches include recruitment of additional health personnel and redistribution of tasks and optimization of roles (84% of countries), procurement of surge commodities (84% of countries), community communications (80% of countries), and provision of home-based care and telemedicine (67% of countries). Most countries are also implementing targeted approaches to ensure access to care for vulnerable groups. In this regard, 75% of countries are using existing networks to reach vulnerable groups, and 70% are using proactive strategies to reach groups in situations of vulnerability.

**Figure 14. Percentage of countries implementing mitigation and recovery actions (n=20)**

<table>
<thead>
<tr>
<th>Service delivery modifications</th>
<th>Catch-up campaigns for missed appointments</th>
<th>Telemedicine deployment</th>
<th>Provision of home-based care where appropriate</th>
<th>Redistribution to alternate care sites/referral pathways</th>
<th>Use of self-care interventions where appropriate</th>
<th>Expansion of facility hours</th>
<th>Integration of several services into single visit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health worker capacities and training</td>
<td>Rapid training and job aids for new tasks and roles</td>
<td>Redistribution of HW tasks and optimization of roles</td>
<td>Mental health care and psychosocial support to HWs</td>
<td>Paid sick leave, overtime pay, and/or hazard pay</td>
<td>Recruitment of additional staff</td>
<td>Accelerated training and early certification of key staff</td>
<td></td>
</tr>
<tr>
<td>Access to medicines and health products</td>
<td>Procurement of surge commodities</td>
<td>Adoption of logistics and management processes</td>
<td>Novel ways for renewing and dispensing prescriptions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community engagement and communication</td>
<td>Community communications</td>
<td>Use of existing networks to reach vulnerable groups</td>
<td>Use of proactive strategies to reach vulnerable groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health financing strategies</td>
<td>Removal of user fees or provision of subsidies</td>
<td>Cash transfers for vulnerable populations to access care</td>
<td>Use of private health facilities to deliver EHS using public funds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
About three quarters of countries in the Region of the Americas have developed or revised policies or plans for continuity of essential health services during the COVID-19 pandemic, including 32% of 19 countries that updated the plans in the last six months. On the other hand, just over a quarter (28% of 18 countries) have plans in place for building longer-term health service resilience and preparedness. Another 55% indicated that they are planning to develop a recovery plan.

Over half of countries (59% of 17 countries) allocated additional funding for longer-term health system recovery and/or health service resilience and preparedness. Access to medicines and supplies and workforce capacities are the most common areas of investment (Figure 15).

Figure 15. Percentage of countries reporting investments for longer-term health system recovery and/or health service resilience and preparedness (of the countries reporting any investments: n=10)

Tracking information related to the continuity of essential health services during the COVID-19 pandemic is critical to proposing immediate planning and investment responses. Survey results show that 92% of 26 countries are tracking disruption to essential health services during the COVID-19 pandemic. More than 90% of countries (75 of 91 countries) are collecting data on comorbidities in COVID-19 patients, while 59% (40 of 68 countries) are collecting or collating patient-level data on post-COVID-19 conditions and their sequelae. All participating countries (15 countries) are collecting data on comorbidities in COVID-19 patients, while 67% (10 of 15) are collecting or collating patient-level data on post-COVID-19 conditions and their sequelae. Some 56% of 16 countries have produced one or more qualitative or quantitative analyses of health inequities during the COVID-19 pandemic.

In addition, countries have continued taking steps to better understand and respond to infodemics and pandemic-related misinformation, with 89% of 28 countries indicating that they had a team dedicated to tracking and addressing health misinformation and infodemics, either within the Ministry of Health or another ministry. These teams perform essential functions, including analyzing and monitoring misinformation and how it affects the acceptance of public health measures and health care seeking. In addition, they propose evidence-based interventions aimed at countering misinformation at the national, subnational, community, and individual levels.
BOTTLENECKS TO IMPLEMENTATION OF ESSENTIAL COVID-19 TOOLS

Access to COVID-19 essential tools (diagnostics and testing, therapeutics, PPE distribution and use, and COVID-19 vaccination) is critical in responding to the COVID-19 pandemic. However, most countries in the Region of the Americas are facing critical challenges to scaling up access to essential COVID-19 tools, notably around health workforce and community demand. Some 90% of 18 countries reported at least one problem related to COVID-19 diagnostics, therapeutics, vaccination, and PPE access. Health workforce challenges were the most commonly cited for therapeutics (60% of 20 countries), while shortages in supply and equipment coupled with health workforce challenges were the most commonly cited problem for diagnostics and testing (50% of 20 countries). Lack of distribution capacity was the most commonly cited problem for PPE distribution and use (30% of 20 countries) while demand-side challenges were the most commonly cited for COVID-19 vaccination (reported by 45% of 20 countries) (Figure 16).

Figure 16. Bottlenecks to scaling up of essential COVID-19 services

<table>
<thead>
<tr>
<th>Bottlenecks for diagnostics and testing (n=9)</th>
<th>0%</th>
<th>5%</th>
<th>10%</th>
<th>15%</th>
<th>20%</th>
<th>25%</th>
<th>30%</th>
<th>35%</th>
<th>40%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of funding</td>
<td>33%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health workforce challenges</td>
<td>33%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shortages in supplies and equipment</td>
<td>33%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand-side challenges</td>
<td>22%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of clear strategy, guidance, or protocols</td>
<td>22%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of data/information</td>
<td>22%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of distribution capacity</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Bottlenecks for therapeutics (n=9)</th>
<th>0%</th>
<th>5%</th>
<th>10%</th>
<th>15%</th>
<th>20%</th>
<th>25%</th>
<th>30%</th>
<th>35%</th>
<th>40%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortages in laboratory supplies and equipment</td>
<td>44%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health workforce challenges</td>
<td>33%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand-side challenges</td>
<td>22%</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of distribution capacity</td>
<td>22%</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand-side challenges</td>
<td>22%</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of clear strategy, guidance, or protocols</td>
<td>22%</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of distribution capacity</td>
<td>0%</td>
<td></td>
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</tbody>
</table>
Countries reported priority needs to scale up all essential COVID-19 tools. The most common cited technical support needs were health worker recruitment, retention, and training; surge procurement; financial planning; and risk communication and community engagement (Table 4). These health system areas are also a main focus of frequently reported strategies being used to overcome service disruptions. PAHO/WHO will continue to support countries in health system strengthening to overcome challenges during and beyond the COVID-19 pandemic.
Table 4: Priority TA/support needs for scaling up essential COVID-19 tools (n=19)

<table>
<thead>
<tr>
<th>ESSENTIAL COVID-19 TOOLS</th>
<th>Diagnostics and testing</th>
<th>Therapeutics</th>
<th>PPE distribution and use</th>
<th>COVID-19 vaccination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical assistance and intervention support needs</td>
<td>40%</td>
<td>60%</td>
<td>5%</td>
<td>35%</td>
</tr>
<tr>
<td>HWF recruitment, retention, and training</td>
<td>45%</td>
<td>35%</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Surge procurement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial planning support</td>
<td>50%</td>
<td>45%</td>
<td>20%</td>
<td>25%</td>
</tr>
<tr>
<td>Risk communications strategies</td>
<td>30%</td>
<td>10%</td>
<td></td>
<td>35%</td>
</tr>
<tr>
<td>Tools/guidance to assess/monitor gaps and capacities</td>
<td>25%</td>
<td>15%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>Procurement of vaccines</td>
<td></td>
<td></td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td>Guidance on developing policies/strategies</td>
<td>0%</td>
<td>20%</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>Guidance for supply chain management</td>
<td>10%</td>
<td>15%</td>
<td>30%</td>
<td>0%</td>
</tr>
</tbody>
</table>
CONCLUSIONS

The results of the third round of the global pulse survey on continuity of essential health services during the COVID-19 pandemic suggest that COVID-19 continues to disrupt essential health services in almost all countries across the Region of the Americas and in all priority health areas and delivery platforms. Notably, the magnitude and extent of disruptions in the delivery of essential health services have persisted since 2020 in most cases, and in some areas even increased.

At the same time as they are struggling to maintain essential health services, most countries in the Region are facing critical challenges to scaling up access to essential COVID-19 tools, including diagnostics and testing, therapeutics, PPE distribution and use, and COVID-19 vaccination – notably around health workforce availability and distribution, shortages in supply and equipment, and community demand-side challenges.

The Region of the Americas still has high COVID-19 infection and mortality rates, which perpetuates the bottlenecks and access barriers that emerged during the pandemic. Within this context, disruptions in essential health services are likely to continue and have negative consequences on health and access outcomes, particularly for groups in situations of greater vulnerability.

To respond to the ongoing struggles, countries in the Region have intensified national efforts to respond to the challenges facing health systems in the context of the pandemic, including both short-term and long-term strategies to overcome disruption and recover services, and to solve their bottlenecks to scale up of essential COVID-19 tools and devising strategies for building longer-term health service resilience and preparedness.

While the relative importance and configuration adopted will depend on the specific country context, the survey results reinforce the need to increase health systems resilience and strong public health capacities to ensure sustained performance of the health system and effective response to future health emergencies. It is essential for national health plans and strategies to continue increasing capacity and adapting care pathways for both COVID-19 and non-COVID-19 patients. Bottlenecks identified in the survey emphasize the need for more human resources for health who have the competences necessary for their roles and are well supported and protected.

To the greatest extent possible, countries need to allocate additional resources to the health system to sustain and expand the delivery of essential services, prioritizing the first level of care and ensuring that additional funds are not solely associated with pandemic response (e.g., spending on testing, tracing, and isolation strategies). Each country should compare the benefits of creating new financing mechanisms with the potential negative consequences that the creation of these parallel programs may have on the provision of essential health services not directly related to pandemic care.
Demand-side challenges for both COVID-19 and non-COVID-19 care identified in the survey highlight the emergence and exacerbation of barriers to access during the pandemic. To better respond to the needs of the population, community-based and health promotion strategies need to be intensified, while addressing the different determinants of access. More efforts are needed to evaluate and learn the best strategies for overcoming barriers and bottlenecks to scale up essential COVID-19 and non-COVID-19 services and building longer-term health systems resilience.

In the context of the COVID-19 pandemic, the mission of PAHO/WHO is to continue supporting the countries of the Region of the Americas in their efforts to address the difficulties faced by health systems, to continue providing access to services, and to close the gaps in service delivery in order to ensure that systems respond to the needs of the population.
RECOMMENDATIONS

Measures taken during the pandemic (temporary scaling back or suspension/cancellation of services) have directly or indirectly affected the provision and continuity of essential health services such as: health post and home visits by community health workers, hospital inpatient services, outreach service (mobile clinics, campaigns), routine scheduled primary care clinic services, cancer screening, appointments with specialists (outpatient), rehabilitative services, and palliative services.

Reopening and facilitating access to these services is urgent to prevent epidemic outbreaks; improve care for patients requiring treatment; decrease waiting lists and cumulative cases for hospitalization and surgeries; and reduce mortality from other causes unrelated to COVID-19.

Other reasons affecting health care services during the pandemic have been disruptions due to lack of health care resources related to health worker availability and capacities, availability of essential health products, facility infrastructure, and space capacities. These challenges of health services are severely affecting the continuity and delivery of services such as: emergency surgeries, 24-hour emergency unit services, elective surgeries and procedures, cancer treatment, and prehospital emergency care services (e.g., ambulance transport). Most of these health services save lives and must be urgently reopened and strengthened.

Other reasons for interruption of essential health services relate to decreased care-seeking (patients not presenting due to community fear/mistrust, financial difficulties during lockdown, or other barriers to care). These causes are affecting services such as routine scheduled primary care clinic services, unscheduled primary care clinic services, prescription renewals for chronic medications, cancer screening, rehabilitative services, palliative services, prehospital emergency care services, and 24-hour emergency unit services. Addressing these causes with communities and leaders to reduce fear, health misinformation, and barriers to access is urgent to meet the care needs of individuals and families.

Measures to reopen essential health services and continuity of care go hand in hand with reinforcement measures and surge capacity to scaling up access to essential COVID-19 tools (diagnostics and testing, therapeutics, PPE distribution and use, and COVID-19 vaccination). The main problems identified relate to health workforce and community demand, shortages in supply and equipment, and lack of distribution capacity, lack of funding, and lack of data.

The main interventions needed relate to health worker recruitment, retention and training, financial planning support, surge procurement, rapid tools to assess and monitor gaps and health system capacities, risk communication and community engagement strategies, operational guidance and protocols for supply chain management, and guidance on developing national policies, strategies, or plans to address these challenges.

Implementation of these measures must be carried out in each country according to the analysis of the situation of COVID-19, the interruptions, and their effects on the health of the population with short- and medium-term strengthening and surge capacity measures within the framework of the country’s plans for building longer-term health service resilience and preparedness.
Three groups of measures are listed below for reopening health services and expanding the capacity to access COVID-19 tools. In the first place, there are the measures aimed at strengthening surge capacity of the first level of care, followed by measures aimed at community engagement health, and the third group measures to strengthen and scale up systems. This order reaffirms the importance and urgency to establish in the countries a model of primary health care with first level services based on the community and strong responsiveness to health promotion, surveillance and public health, prevention disease and emergencies, rehabilitation, and palliative care. The results of the survey have shown during the pandemic the importance of community engagement and access to health information of community leaders and organizations in close collaboration with the health services at the first level of care.

**Measures to reopen essential health services and strengthen capacity surge of first level care**

1. Expansion of facility hours.
2. Catch-up campaigns for missed appointments.
3. Triage and prioritization of specialized outpatient care.
4. Integration of several services into single visit.
5. Establish new schemes in health service delivery networks to prioritize surgery, emergency, kidney, and cancer services.
6. Provision of home-based care where appropriate.
7. Telemedicine deployment to replace in-person consults including tele-rehabilitation.
8. Novel approaches to renewing prescriptions and dispensing medications.
10. Redirection of patients to alternate care sites/reorientation of referral pathways.
11. RedISTRIBUTION OF HEALTH WORKER TASKS AND OPTIMIZATION OF ROLES.
12. Rapid training mechanisms and job aids for key capacities and newly distributed tasks and roles.
13. Recruitment of additional staff.
14. Provision of mental health care and psychosocial support to health workers.
15. Paid sick leave, overtime pay, and/or hazard pay on time.
Measures focused on community engagement and knowledge in population health

1. Community communications (e.g., informing on changes to service delivery, addressing misinformation and community fears of infection, targeted outreach where utilization has declined, hotlines).
2. Use of existing networks or organizations (e.g., NGOs) to reach vulnerable groups.
3. Establish contact and communication with leaders and community organizations to promote and disseminate information promoting health care and disease prevention.

Measures aimed at strengthening and scaling up the health system for resilience and preparedness

1. Establishment of pathways for accelerated training and early certification of medical, nursing, and other key staff (with appropriate controls in place).
2. Use of proactive governmental strategies to reach vulnerable groups.
3. Removal of user fees or provision of subsidies for fees at point of use.
4. Provision of cash transfers for vulnerable populations to access care (e.g., refugees and migrants).
5. Establish budgets and incentives in human resources and health service managers aimed at the articulation and provision of integrated networks of health services and introduce new care modalities such as telemedicine, specialized outpatient care, home care and hospitalization, health promotion, and integrated care.
6. Agreements with private health facilities to deliver essential health services supported through public funds.
7. Adoption of supply chain logistics and management processes.
8. Procurement of surge commodities (e.g., personal protective equipment [PPE], oxygen).
9. Regular monitoring of mitigation or recovery strategies to overcome service disruptions and the long-term effects of essential health service disruptions (e.g., excess morbidity and mortality).
10. Measurements of waiting times in some health problems tracer indicators with a focus on the unmet needs of the population (e.g., DM decompensations, hypertension, diabetic foot admissions).
11. Collecting or collating data on comorbidities in COVID-19 patients and collecting or collating patient-level data on post-COVID-19 conditions and their sequelae.
12. Produced one or more qualitative or quantitative analyses of health inequities during the COVID-19 pandemic (e.g., report, paper, research).
13. Regular monitoring of community needs, perceptions, and demand for health services.

14. Have a team dedicated to tracking and addressing the infodemic and health misinformation (e.g., a taskforce or unit for: analyzing and monitoring misinformation online and offline, and how it affects acceptance of public health measures and health seeking behavior; analyzing and proposing evidence-based interventions to counter misinformation at national, subnational, community, and individual levels).

15. Create regulations that facilitate and empower national health authorities to expedite access to emergency funds and fast and agile purchasing and contracting mechanisms.

16. Establish regulations and increase funding that give sustainability to health systems based on the strategy of primary care and resilient integrated health services and institutionalize the incorporation of strategies and modalities of care that have demonstrated good results during the pandemic.

Finally, the support and technical cooperation for the country to address these issues focus on the following:

• strengthened monitoring and data collection capacities;
• strengthened risk communication and community engagement strategies;
• improved financing, costing, and investment in health services;
• strengthened policies, strategies, or plans of health;
• improved surge capacity, organization, and management of health service delivery;
• better procurement and supply chain;
• strengthened and improved diagnoses, and treatment of COVID-19 and IPC management.
REFERENCES


Annex A: Service Disruptions to Priority Health Service Areas

Countries continue to report disruptions across all major tracer service areas, ranging from about one-third of countries reporting disruptions to sexual, reproductive, maternal, newborn, child, and adolescent health to over half of countries reporting disruptions to immunization and care for older people (Figure A1).

Figure A1. Service disruptions by priority health service area

Analysis across rounds of the survey was limited to 18 countries responding to all three rounds in both Q1 2021 and Q4 2021. Condition-specific services continue to be disrupted (Figure A2).
Figure A2. Comparison of disruptions by tracer services in countries that responded to all three survey rounds: Q3 2020 (Round 1), Q1 2021 (Round 2), and Q4 2021 (Round 3)

Disruptions in services for reproductive, maternal, newborn, child, and adolescent health

On average, 32% of 15 countries reported disruptions in the delivery of reproductive, maternal, neonatal, pediatric, and adolescent health services (Figure A3). Over 50% of countries reported disruptions to well-child visits, adolescent health services, and family planning and contraceptive services, while less than 20% of countries reported disruptions to abortion services, including post-abortion care, NICU services, and facility births. Compared to previous rounds, similar disruption levels continue across most sexual, reproductive, maternal, newborn, child, and adolescent health services. However, there was a 14% increase in the percentage of countries reporting disruptions to family planning and contraception services in Q4 2021 as compared to Q1 2021 (Figure A4).
Figure A3. Percentage of countries reporting disruptions in sexual, reproductive, maternal, newborn, child, and adolescent health services in Q4 2021

Figure A4. Comparison of disruptions for sexual, reproductive, maternal, newborn, child, and adolescent health services in countries that responded to all three survey rounds: Q3 2020 (Round 1), Q1 2021 (Round 2), and Q4 2021 (Round 3)
Disruptions in nutrition services

Figure A5. Percentage of countries reporting disruptions in nutrition services in Q4 2021

- Distribution of high dose vitamin A supplementation (n=7): 43% disrupted, 29% disrupted, 71% disrupted
- Screening for and/or management of moderate and severe wasting (n=16): 31% disrupted, 13% disrupted, 19% disrupted, 63%
- Counseling on infant and young child feeding (n=17): 29% disrupted, 24% disrupted, 6%, 59%

Figure A6. Comparison of disruptions for nutrition services in countries that responded to all three survey rounds: Q3 2020 (Round 1), Q1 2021 (Round 2), and Q4 2021 (Round 3)

Disruptions in routine immunization services

Even as COVID-19 vaccination has been scaled up, about two-thirds to three-quarters of countries reported disruptions to both routine facility-based and outreach immunization services (Figure A7), and severe disruptions in routine immunization services have increased (Figure A8). While most countries (89% of 18 countries) implemented or plan to implement at least one immunization catch-up campaign, about two-thirds (67% of 18 countries) reported a negative impacts on routine immunization services due to increased demands for vaccination resources. Indeed, most countries reported disruptions to routine facility-based immunization services due to COVID-19 vaccination scale up (Figure A9).
Figure A7. Percentage of countries reporting disruptions in routine immunization services in Q4 2021

Figure A8. Comparison of disruptions for routine immunization services in countries that responded to all three survey rounds: Q3 2020 (Round 1), Q1 2021 (Round 2), and Q4 2021 (Round 3)
**Figure A9.** Percentage of countries reporting disruptions to routine immunization services due to COVID-19 vaccination scale up

**Figure A10.** Percentage of countries reporting disruptions in services for mental, neurological, and substance use disorders in Q4 2021
### Figure A11. Comparison of disruptions in services for mental, neurological, and substance use disorders in countries that responded to all three survey rounds: Q3 2020 (Round 1), Q1 2021 (Round 2), and Q4 2021 (Round 3)

<table>
<thead>
<tr>
<th>Service Area</th>
<th>Q3 2020 (n=14)</th>
<th>Q1 2021 (n=16)</th>
<th>Q4 2021 (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Availability of psychotropic medicines</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3 2020 (n=14)</td>
<td>58%</td>
<td>44%</td>
<td>21%</td>
</tr>
<tr>
<td>Q1 2021 (n=16)</td>
<td></td>
<td>6%</td>
<td>21%</td>
</tr>
<tr>
<td>Q4 2021 (n=14)</td>
<td></td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Critical harm reduction services</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3 2020 (n=9)</td>
<td>11%</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>Q1 2021 (n=4)</td>
<td>25%</td>
<td>20%</td>
<td>60%</td>
</tr>
<tr>
<td>Q4 2021 (n=5)</td>
<td></td>
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<tr>
<td><strong>Management of emergency MNS</strong></td>
<td></td>
<td></td>
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<tr>
<td>Q3 2020 (n=14)</td>
<td>36%</td>
<td>44%</td>
<td>21%</td>
</tr>
<tr>
<td>Q1 2021 (n=16)</td>
<td>7%</td>
<td>13%</td>
<td>56%</td>
</tr>
<tr>
<td>Q4 2021 (n=14)</td>
<td></td>
<td>36%</td>
<td></td>
</tr>
<tr>
<td><strong>Services for children and adolescents</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Q3 2020 (n=14)</td>
<td>57%</td>
<td>8%</td>
<td>21%</td>
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<td>Q1 2021 (n=13)</td>
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<td></td>
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</tr>
<tr>
<td>Q4 2021 (n=13)</td>
<td>31%</td>
<td>38%</td>
<td></td>
</tr>
<tr>
<td><strong>Neuroimaging and neurophysiology</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Q1 2021 (n=12)</td>
<td>58%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4 2021 (n=11)</td>
<td>45%</td>
<td>55%</td>
<td></td>
</tr>
<tr>
<td><strong>Psychotherapy, counseling, psychosocial</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3 2020 (n=15)</td>
<td>47%</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>Q1 2021 (n=16)</td>
<td></td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>Q4 2021 (n=14)</td>
<td>57%</td>
<td>7%</td>
<td></td>
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<tr>
<td><strong>School programs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3 2020 (n=13)</td>
<td>15%</td>
<td>62%</td>
<td></td>
</tr>
<tr>
<td>Q1 2021 (n=9)</td>
<td>22%</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>Q4 2021 (n=10)</td>
<td>30%</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td><strong>Services for older adults</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3 2020 (n=14)</td>
<td>64%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1 2021 (n=6)</td>
<td></td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>Q4 2021 (n=13)</td>
<td>64%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td><strong>Substance use prevention and management</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3 2020 (n=8)</td>
<td>59%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1 2021 (n=5)</td>
<td>40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4 2021 (n=12)</td>
<td>25%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Suicide prevention programs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3 2020 (n=12)</td>
<td>58%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1 2021 (n=11)</td>
<td>45%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4 2021 (n=12)</td>
<td>25%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Percentage of countries*
Disruptions in services for communicable diseases

On average, 38% of 11 countries reported disruptions in communicable disease tracer services, about half of countries reported disruptions to HIV prevention and testing services, TB diagnosis and treatment, and malaria diagnosis and treatment, while over one-quarter of countries reported disruptions to continuation of established ARV treatment (Figure A12). Although fewer countries reported disruptions to most communicable tracer services, disruptions in the provision of these services are of particular concern in the Region of the Americas (Figure A13).

**Figure A12. Percentage of countries reporting disruptions in services for communicable diseases in Q4 2021**

- **HIV testing services (n=16)**
  - 19% 31% 6% 56%
- **TB diagnosis and treatment (n=16)**
  - 31% 19% 6% 56%
- **HIV prevention services (n=14)**
  - 29% 14% 7% 50%
- **Malaria diagnosis and treatment (n=6)**
  - 33% 17% 0 50%
- **Hepatitis B and C diagnosis and treatment (n=14)**
  - 29% 14% 0 43%
- **Initiation of new ARV treatment (n=14)**
  - 36% 7% 0 43%
- **Malaria surveillance (n=6)**
  - 17% 17% 0 33%
- **Continuation of established ARV treatment (n=14)**
  - 29% 0 0 29%
- **Insecticide-treated mosquito nets (n=5)**
  - 0 20% 0 20%
- **Indoor residual spraying (n=3)**
  - 0%
Figure A13. Comparison of disruptions in services for communicable diseases in countries that responded to all three survey rounds: Q3 2020 (Round 1), Q1 2021 (Round 2), and Q4 2021 (Round 3)
Disruptions in services for neglected tropical diseases

Neglected tropical diseases encompass a diverse set of diseases and disease groups that are primarily communicable and found primarily in tropical and subtropical countries. On average, 53% of 10 countries reported disruptions for these services (Figure A14). The most predominant disruptions were to community awareness (67% of 12 countries) and large-scale preventive chemotherapy campaigns (63% of 8 countries).

Figure A14. Percentage of countries reporting disruptions in services for neglected tropical diseases in Q4 2021

Figure A15. Comparison of disruptions to services for neglected tropical diseases in countries that responded to all three survey rounds: Q3 2020 (Round 1), Q1 2021 (Round 2), and Q4 2021 (Round 3)

2 Neglected tropical diseases include Buruli ulcer, Chagas disease, dengue and chikungunya, dracunculiasis (Guinea worm disease), echinococcosis, foodborne trematodiases, human African trypanosomiasis (sleeping sickness), leishmaniasis, leprosy (Hansen’s disease), lymphatic filariasis, mycetoma, chromoblastomycosis and other deep mycoses, onchocerciasis (river blindness), rabies, scabies and other ectoparasites, schistosomiasis, geohelminthiasis, snakebite, envenomation, taeniasis and cysticercosis, trachoma and yaws, and other endemic treponematosis.
**Disruptions in services for care for older people**

Older people have been among the most disadvantaged during the COVID-19 pandemic. Round 3 of the global pulse surveys assessed the extent of disruptions in services for care for older people. A total of 67% of 12 countries reported disruptions across all services for older people (Figure A16).

**Figure A16. Percentage of countries reporting disruptions in services for care for older people in Q4 2021**

<table>
<thead>
<tr>
<th>Service</th>
<th>Percentage of countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening and assessment of physical and mental capacities (n=12)</td>
<td>17% 50% 8%</td>
</tr>
<tr>
<td>Health and social care services in the community (n=12)</td>
<td>25% 33% 17%</td>
</tr>
<tr>
<td>Provision of integrated health and social care services (n=12)</td>
<td>25% 42% 0</td>
</tr>
<tr>
<td>Health and social care services in long-term care facilities (n=12)</td>
<td>8% 33% 8%</td>
</tr>
</tbody>
</table>

**Disruptions in services for noncommunicable diseases**

Disruptions in services for noncommunicable diseases were measured through the assessment for the 2021 country profile of capacity and response. This methodology differed from that used in the EHS pulse survey as it includes an extra category indicating minimal disruption (up to 5%). Due to this, the percentage of countries reporting any disruption is not comparable with the percentages reported for other services.

**Figure A17. NCD services disruption. NCD Country Capacity Survey (CCS) 2021**

<table>
<thead>
<tr>
<th>Service</th>
<th>Percentage of countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular emergencies (including MI, stroke, and cardiac arrhythmias)</td>
<td>31% 29% 9% 6%</td>
</tr>
<tr>
<td>Cancer screening (n=35)</td>
<td>17% 31% 6% 17%</td>
</tr>
<tr>
<td>Diabetes and diabetic complications management</td>
<td>20% 31% 11% 6%</td>
</tr>
<tr>
<td>Hypertension management (n=35)</td>
<td>17% 26% 14% 9%</td>
</tr>
<tr>
<td>Urgent dental care (n=35)</td>
<td>14% 20% 14% 6%</td>
</tr>
<tr>
<td>Asthma services (n=35)</td>
<td>17% 26% 14% 6%</td>
</tr>
<tr>
<td>Cancer treatment (n=35)</td>
<td>23% 26% 6% 5%</td>
</tr>
</tbody>
</table>
ANNEX 2: LIST OF 66 TRACER SERVICES ASSESSED IN THE THIRD ROUND OF THE GLOBAL PULSE SURVEY ON CONTINUITY OF ESSENTIAL HEALTH SERVICES DURING THE COVID-19 PANDEMIC

The global pulse survey on continuity of essential health services during the COVID-19 pandemic aims to rapidly assess the impact of the pandemic on health systems and essential health services throughout the course of the pandemic. The survey provides insight from country key informants into the current country situation, the extent of disruptions, and how countries are responding to mitigate challenges and recover services against a rapidly changing context.

Service delivery settings and platforms

**Primary care**
- Routine scheduled primary care clinic services
- Unscheduled primary care clinic services
- Prescription renewals for chronic medications

**Emergency, critical, and operative care**
- Prehospital emergency care services (e.g., ambulance transport)
- 24-hour emergency unit services
- Emergency surgeries
- Elective surgeries and procedures

**Rehabilitative and palliative care**
- Rehabilitative services
- Palliative services

**Community care**
- Outreach services
- Health post and home visits by community health workers

**Other**
- Appointments with specialists
- Hospital inpatient services

**Condition-specific tracer health service areas**

**Sexual, reproductive, maternal, newborn, child, and adolescent health**
- Family planning and contraception
- Safe abortion
- Post-abortion care services
- Fertility care/infertility services
- Identification and care for intimate partner violence
• Response to sexual violence (post-rape care)
• Antenatal care
• Facility-based births
• Postnatal care for women and newborns
• Neonatal intensive care unit (NICU) services
• Sick child services
• Well-child visits, including growth and developmental monitoring and counseling
• Adolescent and youth friendly services

**Nutrition**
• Counseling on infant and young-child feeding (IYCF)
• Screening for and/or management of moderate and severe wasting
• Distribution of high dose vitamin A supplementation

**Immunization**
• Routine facility-based immunization services
• Routine outreach immunization services

**Human immunodeficiency virus and hepatitis**
• Human immunodeficiency virus (HIV) prevention services (e.g., pre-exposure prophylaxis, provision of condoms and lubricants, voluntary medical male circumcision, harm reduction services)
• Human immunodeficiency virus (HIV) testing services
• Continuation of established antiretroviral (ARV) treatment
• Initiation of new antiretroviral (ARV) treatment
• Hepatitis B and C diagnosis and treatment

**Tuberculosis**
• Tuberculosis (TB) diagnosis and treatment

**Malaria**
• Malaria diagnosis and treatment
• Insecticide-treated mosquito nets (ITN)
• Indoor residual spraying (IRS)
• Seasonal malaria chemoprevention (SMC)
• Malaria surveillance
Neglected tropical diseases (NTDs)
• Diagnosis, treatment, and care for NTDs (facility-based)
• Large-scale preventive chemotherapy campaigns for NTDs (e.g., mass drug administrations and/or school-based treatments)
• Community awareness and health education campaigns for NTDs (e.g., WASH promotion, disease prevention, vector control, eradication)
• Support for self-care, rehabilitation, and psychosocial services for patients with chronic NTDs
• Prescriptions for NTD medicines
• Surgical procedures for NTDs

Mental, neurological, and substance use (MNS) disorders
• Management of emergency MNS manifestations (including suicide attempt, status epilepticus, delirium, drug overdose, severe substance withdrawal syndromes)
• Psychotherapy/counseling/psychosocial interventions for MNS disorders
• Availability of psychotropic medicines for management of MNS disorders
• Services for children and adolescents with mental health conditions or disabilities, including developmental disabilities
• Services for older adults with mental health conditions or disabilities, including dementia
• Neuroimaging and neurophysiology
• School mental health program
• Inclusive schooling for children with special needs
• Suicide prevention program
• Substance use prevention and management programs
• Alcohol prevention and management programs
• Critical harm reduction services (e.g., needle exchange programs, outreach services)

Care for older people
• Health and social care services in long-term care facilities (e.g., nursing homes)
• Health and social care services in the community (e.g., day care centers and home visits)
• Screening and assessment of physical and mental capacities for older people (e.g., mobility, cognition, mood, nutrition, vision, and hearing)
• Provision of integrated health and social care services for older people (e.g., management of functional decline, noncommunicable diseases management, vaccination)

Cancer care
• Cancer screening
• Cancer treatment
ANNEX 3: LIST OF COUNTRIES, TERRITORIES, AND AREAS THAT PARTICIPATED IN THE THIRD ROUND OF THE PULSE SURVEY ON CONTINUITY OF ESSENTIAL HEALTH SERVICES DURING THE COVID-19 PANDEMIC

PAHO/WHO would like to express its gratitude to all authorities and PAHO/WHO Country Offices in the Region of the Americas that supported participation in the third round of this survey: Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bermuda, Bolivia (Plurinational State of), Brazil, British Virgin Islands, Chile, Costa Rica, Cuba, Dominica, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Panama, Peru, Saint Vincent and the Grenadines, Suriname, Turks and Caicos Islands, United States of America, Uruguay, and Venezuela (Bolivarian Republic of).