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COVID-19 Disruption To Routine Health Care Services: How 8 Latin American And Caribbean Countries Responded

ABSTRACT **Latin America and the Caribbean was one of the regions hardest hit globally by SARS-CoV-2. This qualitative exploratory study examined how the COVID-19 pandemic disrupted the delivery of routine health services from the perspective of health care system decision makers and managers. Between May and December 2022, we conducted forty-two semistructured interviews with decision makers from ministries of health and health care managers with responsibilities during the COVID-19 pandemic in eight countries in Latin America and the Caribbean. On the basis of these interviews, we identified themes in three domains: impacts on the provision of routine health services, including postponed and forgone primary care and hospital services; barriers to maintaining routine health services due to preexisting structural health care system weaknesses and difficulties attributed to the pandemic; and innovative strategies to sustain and recover services such as public-private financing and coordination, telemedicine, and new roles for primary care. In the short term, policy efforts should focus on recovering postponed services, including those for noncommunicable diseases. Medium- and long-term health care system reforms should strengthen primary care and address structural issues, such as fragmentation, to promote more resilient health care systems.**

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Latin America and the Caribbean has been one of the regions of the world most affected by SARS-CoV-2, the virus causing COVID-19.[1] Home to 8.5 percent of the world's population, the region had accounted for approximately 12 percent of global COVID-19 cases (more than 82.2 million cases) and 26 percent of all deaths (more than 1.7 million deaths) by the end of February 2023.[2] The pandemic has not only had an effect on the health of the region's population but has also been felt in other areas, such as education, where school closures left approximately 170 million children out of school, losing the equivalent of 1.5 years of learning,[3] and the economy, with a –7.7 percent contraction of the regional gross domestic product in 2020—the largest decrease seen in a hundred years, and the worst worldwide.[4] These effects are worsened by the fact that Latin America and the Caribbean is the most unequal region in the world in terms of wealth,[5] with low economic growth projected for the coming years. Furthermore, the region is very diverse demographically, with fifty million indigenous people belonging to more than 500 different ethnic groups, and population displacements due to internal conflicts are commonplace.[6]

The COVID-19 pandemic affected human health not only directly through SARS-CoV-2 but

also indirectly through the disruption of routine health services delivery. Taking the health systems framework proposed by the World Health Organization (WHO) in 2000,[7] health services delivery is one of the four functions related to health care system performance analysis, alongside governance, financing, and resource generation. It includes the organization of inputs, such as human resources and infrastructure, to ensure the availability of health interventions in three main areas: public health, primary care, and specialized care.[8] In studying the experiences of health care system decision makers and managers in Latin America and the Caribbean, we also concentrated on the governance function, which is responsible for increasing inputs to ensure access to services for the population and for ensuring minimum quality standards by developing public policies and harmonizing with the other three health care system functions.

A disruption in health services delivery occurs when a person does not obtain access to health care despite perceiving a need for it, representing the gap between the perceived need and the actual use of health care services.[9] At the health care system level, this disruption during the COVID-19 pandemic has usually been analyzed in comparison with prior trends in health services delivery, and several studies have documented interruptions across different types of services affecting multiple population groups in Latin America and the Caribbean.[10–15]

In making decisions to confront the health crises driven by COVID-19, health care system decision makers and managers had to work both within and beyond the health sector to develop public health policies and manage limited resources. However, the challenges they faced and the tools they used to inform decision making during the pandemic have not been extensively explored—and even less so in countries in Latin America and the Caribbean.

The purpose of this article is to examine, from the perspective of health care system decision makers and managers in eight countries in Latin America and the Caribbean, how the COVID-19 pandemic affected routine health services delivery, what the barriers were to maintaining such services, and what strategies were developed to sustain them over time.

Study Data And Methods

STUDY DESIGN This was an exploratory qualitative study developed through semistructured interviews, which were part of a larger study supported by the World Bank, with several objectives related to the impact of the COVID-19 pandemic in selected countries in Latin America and the Caribbean.[6]

PARTICIPANTS The sample was purposive. Two criteria were used to select the participants: first, achieving geographical representativeness of the region; and second, covering the main levels of care of each country's health system, for which secondary sources were reviewed to identify the most suitable stakeholders to interview. The study was carried out in eight countries: Argentina, Chile, Colombia, Paraguay, Peru, and Uruguay in South America; the Dominican Republic in the Caribbean; and Mexico in North America (see online appendix exhibit 1 for a description of the health care systems included in the study).[16] Subsequently, we constructed four profiles of health care system levels: public policy making (for example, ministers or vice ministers of health), health services provision planning (for example, provincial or regional directors), primary health care (for example, primary health care center directors and network managers), and hospital management (for example, medical directors of hospitals providing care for patients with COVID-19). Through local contacts and with the assistance of ministries of health in each country, we identified corresponding people at each level to be interviewed (see appendix exhibit 2 for descriptions of the interviewees).[16]

DATA COLLECTION Interviews were performed using specific guides for each health care system level profile. The four interview guides were open ended and informed by the literature and the research team's experience. Data were collected on all countries from May through December 2022 by two academic teams based in Chile and Mexico via video calls. The interviews were recorded after obtaining prior oral informed consent. Forty-two health care system decision makers and managers with responsibilities during the COVID-19 pandemic participated in the study. Respecting ethical issues and confidentiality, the names of the participants and specific locations where they work were removed from the database used to carry out the analysis.

DATA ANALYSIS The audio recordings were transcribed verbatim. Data were analyzed using thematic analysis.[17] Data coding and analysis were performed manually. The data followed two analytical processes. First, a coarse codification of three thematic axes was carried out from the interview guides. Then, two types of information summaries were produced, by the interviewee's type of profile and by topic explored. Subsequently, topics of interest were separated and compared. Seven categories were constructed: health policy development, care experience, interruption of health services, strategies for recovery of care services, steering and mana-

gerial functions, public-private collaborations, and barriers and opportunities for improving health care system resilience. From these categories, twenty-three subcategories were derived (see the process followed in a code tree presented in appendix exhibit 3).[16] We synthesize our findings across three main areas in the results section.

LIMITATIONS We acknowledge several limitations. The choice of interviewees made through local contacts may have incorporated some bias. In addition, the information presented here should not be understood as an absolute representation of the diverse contexts and complexities that each country entails, and all were upper-middle- or high-income countries. The limited amount of time provided by the interviewees stemming from their roles as high-level officials was another important element in the development of the interviews, which were conducted remotely. Finally, during data collection, differentiating between forgone and interrupted or postponed health services proved challenging for the interviewees, which created difficulties when we assessed this issue.

Study Results

Our main findings fall into three broad categories: disruption of routine health services delivery, barriers and reduced demand, and policies and strategies to restore and sustain routine health services. The findings are described in detail below. Further details are in appendix exhibits 4 and 5.[16] (See the interactive infographic presentation of our findings that accompanies this article online.)[18]

DISRUPTION OF ROUTINE HEALTH SERVICES DELIVERY Findings from the interviews regarding the ways in which routine health services were disrupted during COVID-19 converged and were generally concordant. The most salient observations, according to interviewees representing primary health care and hospital management, are highlighted below.

▶ **PRIMARY HEALTH CARE:** According to those interviewed, primary health care was one of the most disrupted types of health services. In all countries, the reasons reported were similar: closure of medical facilities offering primary care because of personnel being reassigned to treat patients with COVID-19, health personnel becoming ill with COVID-19, lack or shortage of medical supplies, and lack of medicines and personal protective equipment (PPE). The types of primary care services that were forgone during the pandemic were also similar in all countries. These services included follow-up care for patients with chronic diseases, screening and early disease detection services, and preventive services offered in group settings. In Paraguay, notably, one interviewee spoke about the loss of follow-up of patients suffering from tuberculosis.

There was agreement on other services that were frequently interrupted or had to be postponed, including care for mental health and routine vaccinations for children. In Uruguay and Argentina, the interruption of home-based palliative care mostly affected the elderly population. Although health center closures were partial and intermittent, vulnerable populations in rural and indigenous areas (for example, in Paraguay and Peru), as well as people on the outskirts of large cities, were disproportionately affected. An interviewee from the Dominican Republic described the impact of disruptions on efforts to prevent maternal and infant mortality as COVID-19 care was prioritized.

▶ **HOSPITAL CARE:** According to the interviewees, there was consistency in the nature of forgone hospital services, including cancellations of nonurgent scheduled surgeries, some emergency hospital procedures, and specialty medical consultations. The most common services interrupted were those provided by oncology and other medical specialties, as well as elective surgeries. Hospital services were restructured in three ways in response to COVID-19: There were hospitals for the exclusive care of patients with COVID-19, there were hospitals for the care of non-COVID-19 conditions, or the same hospital was divided into two areas (COVID-19 care and non-COVID-19 care). In the hospitals designated to care for patients with COVID-19 only, both new health personnel and those who were reassigned from other facilities were brought in to meet the demand for care of these patients. The cancellation or rescheduling of surgeries, according to one of the interviewees from Chile, implicitly carried the risk that patients would develop complications. Hospitals delivering care for non-COVID-19 conditions were saturated and continued to provide urgent care; however, they faced shortages of medicines and supplies and a reduction in health personnel, which led to the interruption of various services. The hospitals providing both COVID-19 and non-COVID-19 care also faced the challenge of isolating patients with COVID-19.

▶ **CONSEQUENCES OF SERVICE DISRUPTION:** Delays in care, poor treatment adherence, missing prescription refills, fewer diagnostic tests, postponed disease screenings and preventive care services, and canceled surgeries and specialty consultations represent some of the ways in which interviewees recognized that the reorganization of medical services because of

COVID-19 had an effect on routine health services delivery. The interviewees also agreed that delayed disease detection and diagnosis will have the greatest negative impact and most serious consequences for populations that have traditionally lagged behind in access to health services, such as the indigenous populations of Colombia, Mexico, Paraguay, and Peru.

BARRIERS TO ROUTINE HEALTH SERVICES DELIVERY AND REDUCED DEMAND

▶ **PREPANDEMIC STRUCTURAL WEAKNESSES:** Given the magnitude of the COVID-19 health emergency, preexisting deficiencies in the capacity of health care systems to meet the demand for care was an issue that all countries faced. Reported structural deficiencies may be classified into two categories: basic infrastructure and human resources. In the first category, interviewees described a wide range of infrastructure deficits, including shortages of ambulances, which hindered access to timely treatment both for patients who became ill with COVID-19 and for patients experiencing urgent health problems. The case of Peru also stands out, where one of the management-level interviewees pointed out that there was a lack of drinking water in 30 percent of the country's health centers and no computer or internet access in 70 percent of them.

Furthermore, "the levels of demand during the pandemic revealed large gaps—an accumulation of more than twenty years of scarce production of health infrastructure at the different levels of care…the availability of human resources… intensivists, respiratory care physicians, cardiologists. And the number of intensive care units [ICUs] and ad hoc equipment below [Organization for Economic Cooperation and Development] parameters, even the most basic parameter of 8.5 per hundred thousand inhabitants in terms of availability of ICU beds" (Peru, public policy making–level interviewee).

Most interviewees concurred in their opinions on the insufficiency of hospital infrastructure and obsolete technology: "We found old, deteriorated hospitals with providers whose payments had been cut off" (Argentina, management-level interviewee). In general, capacity for information technology has been limited, especially in dispersed and rural areas. In contrast, Uruguay reported better technological infrastructure (for example, electricity and internet), even in rural areas, which was cited as a strength for better connectivity and communication during the pandemic. Since the pandemic, Colombia has undertaken an assessment to determine where efforts to improve information systems should be targeted.

Interviewees also commented on and agreed on the importance of prioritizing infrastructure improvements within primary care settings because of the COVID-19 health emergency. For example, Paraguay has focused on strengthening primary health care capacity since 2020 (402 new primary care facilities were created, and 300 existing facilities were repaired). Notably, in the Dominican Republic, one of the interviewees recognized the absence of primary care in the country's COVID-19 response strategy as the main challenge facing the region, as all demand for care had to be absorbed by hospitals.

Regarding the deficit in human resources, the greatest reported shortages were among nursing personnel, professionals specializing in intensive care, and general practitioners. Interviewees also commented on the need to redistribute health personnel to rural areas to promote more equitable access to care.

"It was an infrastructure issue, and we did not have the personnel. It was not financially planned—we did not have the equipment, the conditions of the building were not suitable for intensive care units, and we practically had to set up oxygen networks, vacuum networks, to be able to set up ventilators, monitors and so on. …That's how it happened" (Colombia, hospital management–level interviewee).

▶ **FINANCES, PERSONNEL, AND MEDICAL SUPPLIES:** Among the barriers to maintaining ongoing routine health services delivery, interviewees frequently mentioned challenges associated with financing expanded hospital services, hiring additional health personnel, and purchasing medical supplies and PPE. Likewise, the way in which care was provided differed according to the type of health care system and insurance scheme in each country, symbolizing another obstacle. As an example, a hospital director in Colombia pointed out difficulties in acquiring appropriate amounts of PPE with respect to the financial support offered by the occupational risk insurance companies (Administradoras de Riesgos Laborales, or ARLs); although the ARLs provided resources, they covered less than 5 percent of the total PPE required. In Peru, an interviewee formerly working at the ministry of health recalled that 7,000 primary care facilities were closed because of the lack of PPE or sufficient personnel, which affected the pediatric population, among others, by interrupting immunizations and access to drugs to reverse cases of anemia in children younger than age three.

Efforts to maintain health services delivery and reduce the risk for COVID-19 spread, such as telemedicine or home care, were not well received in all countries. Some health personnel rejected telemedicine because it prevented direct contact with patients. With home care, there were concerns about the biosafety and hygiene con-

An important implicit finding of the study was that despite recognition of the importance of primary health care, it was not prioritized during the pandemic.

ditions to which physicians were exposed when visiting patients' homes, which generated internal conflicts among health personnel that primary health care network managers had to deal with. In Chile, there were challenges related to delivering home care services because of the population's resistance to allowing health personnel to enter their homes. At the same time, health personnel experienced burnout and mental health problems.

"During 2020, we did not receive resources to hire additional health care workers, so all the personnel worked everywhere. We had psychologists, dentists, nutritionists delivering medicines in pharmacies and at home; social workers, paramedics as hosts at the doors. ...We all functioned in all areas" (Chile, primary health care–level interviewee).

▶ **REDUCED DEMAND AND ACCESS:** The decrease in demand for medical consultations also created a barrier to health services, with two main reasons cited by interviewees: fear of infection and mobility restrictions resulting from COVID-19-related confinement measures. In addition, there were technological obstacles unique to each country's health care system. For example, in Colombia, one interviewee mentioned the technology platform used to schedule appointments, whereas in other countries, only patients with access to smartphones or other electronic devices could follow up with their providers if they were being monitored remotely, with patients in poor or rural areas being the least likely to do so.

INNOVATIVE POLICIES AND STRATEGIES TO RESTORE AND SUSTAIN ROUTINE HEALTH SERVICES

Appendix exhibit 5 summarizes how interviewees described ways to restore access to health services in each country both during the pandemic and as reflected in plans for the future.[16]

▶ **SUSTAINING HEALTH SERVICES:** We identified seven common interventions implemented in Latin America and the Caribbean during the pandemic to sustain access to health services: providing health care services to the entire population of patients with COVID-19, regardless of the social security scheme they had; expanding and reconverting hospital resources (for example, beds and hospitals rooms) to treat complex COVID-19 cases; easing regulations for hiring and retaining health personnel (for example, liberalizing requirements for hiring national and foreign personnel and increasing compensation); authorizing new emergency spending for the health sector to maintain critical services; supporting the expansion of telemedicine and information technology (for example, scheduling appointments, conducting consultations, and sending prescriptions) and developing new telemedicine regulations; pursuing new strategies in case follow-up (for example, home delivery of medicines via mail; home-based care; use of call centers to raise awareness about COVID-19 symptoms and make referrals to available health centers or hospitals for treatment; and neighborhood groups, as in Uruguay, where communities organized themselves with *ollas populares*, or people's pots, to provide free food to people in need); and instituting financing policy changes (for example, eliminating copayments for patients with COVID-19 requiring hospitalization and financing of hospital payrolls for new staff).

▶ **HEALTH SERVICES RECOVERY:** According to the interviewees, COVID-19 recovery plans prioritized preventive services (Argentina), as well as rescheduling postponed surgeries (Chile, Mexico, Peru, and Uruguay). There was agreement about the sizable tasks that remained as health care systems worked to design regulatory frameworks to facilitate the permanent use of policies and initiatives tested during the pandemic, such as the unification of care regardless of the type of health insurance (Chile and Peru) and the use of telemedicine (Chile and Dominican Republic), where data management and security must be guaranteed. Similarly, there was agreement on promoting medical facilities as spaces where contagion was minimized for patients and workers (Chile), expanding consultation capacity by means of mobile facilities (Argentina), extending health services coverage to rural areas (Mexico and Peru), using hospital resources that had already been expanded for treating complicated COVID-19 cases among patients with other diseases and comorbidities (Chile, Colombia, and Paraguay), and retaining contracted health personnel to support excess demand for postpandemic care (Paraguay). Oth-

er aspects of recovery mentioned were the need to strengthen primary care (Chile, Colombia, and Paraguay); improve computer networks in medical facilities (Argentina); open psychological care areas to support bereavement processes (Peru); and reestablish contact with patients with other communicable diseases, such as tuberculosis, with a focus on vulnerable populations and rural areas (Mexico and Peru). After facing the pandemic, decision makers believed that the crisis placed the ministries of health in a leadership position to coordinate and direct health activities with the various actors that participated in the pandemic response, such as other government sectors and private entities. Such coordination is considered a model for what can be done to deliver health services moving forward.

Discussion

Our study found that decision makers and managers in Latin America and the Caribbean perceived that routine health services were harshly affected in both the primary health care and hospital settings, and particularly services for noncommunicable chronic diseases, disease screening, medical consultations, and scheduled surgeries. Interviewees identified services that were postponed and can now be prioritized, including cancer screenings, nonurgent elective surgeries, mental health services, and dental care. This is consistent with previous studies that have found a general disruption of routine services—for instance, in research using the WHO global pulse survey[19] and documented specifically in Latin America and the Caribbean[15]—and disruptions to specific services, such as cancer and cardiovascular disease care, with a greater impact on women in Chile,[11] and reductions in cancer-related medical appointments or hospital admissions,[13] stroke care,[14] and prenatal procedures, diabetes, and medical consultations in Brazil.[10] Similar findings have been reported with hospitalizations in the US[20] and for several routine services in Organization for Economic Cooperation and Development countries.[21]

Our findings coincide with those of other qualitative studies exploring the perspectives of decision makers in specific countries in Latin America and the Caribbean. For example, decision makers in Peru identified telemedicine as a key strategy for maintaining and restoring mental health services.[22] In Colombia, a study with decision makers found that new models of financing and contracting between insurers and public and private health services providers, in addition to providing health services at the community level regardless of insurance affiliation, were critical to improving COVID-19 surveillance.[23] Another study in Colombia found that effective management and coordination among national health leaders (that is, national-level planners and coordinating bodies, insurance companies, health professional associations, and trade associations) accelerated the expansion of telemedicine and that relaxing or changing regulatory practices facilitated personnel and service changes, including hiring new staff.[24] The present study is also a useful qualitative complement to the more extensive quantitative literature on the subject.

The impact of the pandemic on routine health services delivery in Latin America and the Caribbean was partly a result of unintended consequences of changes in the organization and structure of health services delivery required to address the pandemic, such as the prioritization of patients with COVID-19 over patients with other conditions, the postponement of elective surgeries and chronic disease management, and the need for coordination with the private sector. These adjustments created other demands that were met to a greater or lesser extent according to the capacity of the health infrastructure and human resources available in each country; consequently, the stewardship role of the ministries of health became more critical during the pandemic.

Several of the aforementioned initiatives and policies developed during the COVID-19 emergency in Latin America and the Caribbean provide lessons to inform future actions. In the short term, policies and investments can be aimed at restoring and improving the volume of key interrupted services, such as those for noncommunicable diseases, including cancer screening and treatment and diabetes care, and routine childhood immunization for communicable diseases (for example, tuberculosis). Although there is already evidence of the negative impact of disrupted care on health outcomes (for example, patients with cancer presenting with more advanced-stage disease coupled with worse survival outcomes in Chile),[25] progress made during the pandemic can be maintained. For example, the expansion of the health workforce and the use of technologies such as telemedicine and mobile health can be strengthened.[26] These policies can be continued with the national-level support that was provided during the pandemic to ensure a more equitable distribution of resources and sustainability over time. However, countries in Latin America and the Caribbean are at very different starting points,[27] with countries such as Uruguay reporting having a well-established health information system with more tools to further implement such strategies.

An important implicit finding of the study was that despite recognition of the importance of primary health care, it was not prioritized during the pandemic. This suggests that most efforts were directed at hospital services, mainly because of the response to the surge of patients with COVID-19. However, in discussions of how to recover services, primary health care integration emerged as a strategy considered by countries with relatively stronger health systems, such as Chile and Colombia, showing how countries with more developed primary health care networks see its value. Strengthening primary health care is a widely recognized strategy to which countries in Latin America and the Caribbean should devote and prioritize policy attention, resources, and innovation.

Looking ahead, medium- and long-term reforms could address structural issues and help build more resilient health care systems to face future public health emergencies,[6,28] resulting not only from epidemics and pandemics but also from other shocks such as climate change.[29] For instance, given that health care systems in this region are structurally fragmented,[30] typically into public, social security, and private sectors, countries can reduce this fragmentation by ensuring the same basket of services and financial coverage for the different parts of the system. This would allow the whole system to meet basic common standards, which would help with responding to future emergencies and sustaining essential services in a better way. It was evident that patients with COVID-19 received care from public or private providers, so bringing the latter into the system with appropriate regulations such as limited copayments and payment mechanisms that promote quality of care can boost health system capacity. Because Latin America and the Caribbean is a region characterized by relatively low public spending on health, this will need to be coupled with reforms that can increase fiscal space[31] and generate revenue for such spending through policies such as health taxes,[32] or excise taxes imposed on tobacco, alcoholic drinks, sugar-sweetened beverages, and other products that have a negative public health impact.

Conclusion

This study addressed the issue of disrupted health services delivery during the COVID-19 pandemic in several countries in Latin America and the Caribbean from the perspective of health care decision makers and managers. We found that a common challenge was tackled in different ways, according to countries' own contexts and health care system capacities, but with some shared features such as a high degree of stewardship at the national level and coordination between public and private entities to provide care. Future investments and policies can aim to recover postponed services, such as those for noncommunicable diseases, in the short term. Medium- and long-term reforms should address structural issues and help build more resilient health care systems. ■

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