

COMMENT

Open Access



# Intersectoral collaboration in the COVID-19 response in Latin America and the Caribbean

Donald T. Simeon<sup>1\*</sup>, Victor Cuba<sup>2</sup>, Shelly-Ann Hunte<sup>1</sup>, Kershelle Barker<sup>1</sup> and Midori de Habich<sup>3</sup>

## Abstract

World Health Organization (WHO) / Pan American Health Organization (PAHO) encouraged the utilization of *whole-of-society* and *whole-of-government* strategic approaches to increase countries' resilience towards mitigating the impact of the COVID-19 pandemic. Strategies included the implementation of multi-sectoral, multi-partner and multi-stakeholder planning, coordination, consultation, and action. We reviewed the experiences of three Latin American and Caribbean countries, related to the implementation of collaborative strategies in tackling COVID-19, specifically the nature of the collaboration, the dynamics and the stakeholders involved.

A systematic literature review identified relevant publications and content analysis was conducted to determine the collaborative strategies. Colombia, Costa Rica, and Trinidad and Tobago were selected as case studies since they were from different LAC subregions and because of the accessibility of relevant literature.

In the three countries, the pandemic response was coordinated by a national executive committee, led by the Ministry of Health. Intersectoral collaboration was evident in each, with the key stakeholders being public sector agencies, the private/corporate sector, private/non-profit, academic institutions, and international agencies. It was used primarily to facilitate data-driven, evidenced-informed decision-making and guidelines; to expand clinical care capacity and strengthen the national medical response; and to provide support for the most vulnerable populations.

While the institutionalization of intersectoral collaboration can be recommended for the health sector beyond the pandemic, research is needed to evaluate the impact of specific collaborative strategies as well as barriers and facilitators.

## Introduction

Over the last two decades, several international declarations and frameworks have emphasized the importance of strengthening the preparedness of health systems to respond to disasters and health crises or emergencies [1–5]. The consistent underpinning message is that an underprepared health system cannot cope with sudden

health service demands, leading to preventable human suffering, loss of life, and economic losses. Each of the six World Health Organization (WHO) health system building blocks (service delivery, health workforce, health information systems, medical products/vaccines/technology, financing, and leadership/governance) includes emergency preparedness and management functions that could contribute to the resilience of the system. This resilience includes the ability of the system to resist, absorb, accommodate, and recover from the effects of a crisis, including the preservation and restoration of essential health services. The COVID-19 pandemic has been an acid test of the readiness of health systems across the globe to attend to emergencies that we had not experienced in over a century.

\*Correspondence:

Donald T. Simeon  
[donald.simeon@sta.uwi.edu](mailto:donald.simeon@sta.uwi.edu)

<sup>1</sup> Caribbean Centre for Health Systems Research and Development, The University of the West Indies, 25A Warner Street, St. Augustine, Trinidad and Tobago

<sup>2</sup> Independent Researcher, Lima, Peru

<sup>3</sup> University of Applied Sciences, Lima, Peru



© The Author(s) 2024. **Open Access** This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License, which permits any non-commercial use, sharing, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if you modified the licensed material. You do not have permission under this licence to share adapted material derived from this article or parts of it. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/>.

Latin America and the Caribbean (LAC) countries responded to the pandemic using guidelines from Pan American Health Organization (PAHO) and WHO [6–8]. Implementation of recommended public health measures varied within and across countries, and from wave to wave [6, 7, 9]. These strategies included case identification and isolation; contact tracing and quarantine; physical distancing; and hygienic practices. These were also accompanied by drastic labour, educational, and transportation containment measures.

Systems thinking was proposed as the most appropriate approach for policymakers to respond to COVID-19 and its consequences [10, 11]. This has long been recognized as key to strengthening health systems and tackling complex health and social issues and challenges [12]. The ‘whole system approach’ is defined as “*a dynamic way of working, bringing stakeholders, including communities, together to develop a shared understanding of the challenge and integrate action to bring about sustainable, long-term systems change*” [13]. It involves applying systems thinking methods and practice to understand complex issues and identify collective actions. WHO described this approach as including whole-of-government, whole-of-society, Health in All Policies, and other multi-sectoral and intersectoral actions that transcend traditional sectoral boundaries and build accountability across sectors [14].

Consistent with this, WHO developed its COVID-19 Strategic Preparedness and Response Plan (SPRP), comprising nine technical and operational pillars [15]. The first pillar is *Coordination, Planning, Financing, and Monitoring*. It proposed that national public health emergency management mechanisms should be activated with the engagement of relevant Ministries to provide coordinated management of COVID-19 preparedness and response. This pillar endorsed the need for a multi-sectoral, whole-of-government coordination mechanism and knowledge platform that brings together critical people and information to guide, monitor, and review national responses.

The SPRP’s accompanying operational plan provided practical guidance for whole-of-government and whole-of-society strategic action that could be adapted [16]. Notably, actions included the requirement to “*activate multi-sectoral, multi-partner coordination mechanisms*”; and “*Engage all relevant national authorities, key partners and stakeholders to develop a country-specific operational plan...*” [16]. PAHO’s Framework for the Response of Integrated Health Service Delivery Networks also supported intersectoral approaches in the COVID-19 response [17].

We identified and analysed LAC countries’ experiences in the use of collaborative strategies in their COVID-19 response, as recommended in the SRP. The latter was used as the conceptual framework for the paper.

## Methods

A systematic literature review was conducted to identify collaborative strategies adopted by LAC countries in response to COVID-19, published between January 2020 and May 2022. This included a systematic examination of *PubMed* and *Health Systems Evidence* databases for publications, as well as a scoping search using *Google Scholar* and *Google* search engines to identify grey literature.

Keywords included “intersectoral collaboration” / “multi-sectoral collaboration”; “Latin America and the Caribbean” / “LAC”; “COVID-19” / “SARS-COV-2” / “coronavirus” / “pandemic”; “health services”; “governance” / “health systems governance”; and “leadership”. The inclusion criteria were studies and reports conducted in or focused on LAC countries and published in English or Spanish.

Subsequently, three countries i.e., Colombia, Costa Rica, and Trinidad and Tobago, were selected as case studies. This was based on representation of the principal LAC subregions (South America, Central America, and The Caribbean, respectively) and accessibility of relevant literature.

The initial search strategy yielded over 500 results from database searches and more than 300,000 results from search engine scoping. Most articles were excluded for not meeting the inclusion criteria or not being related to the three selected countries. Notably, 45 articles met the selection criteria (Colombia: 16; Costa Rica: 12; Trinidad and Tobago: 17). Of these, 24 informed the three case studies.

Content analysis of these reports was conducted; that is, we reviewed various aspects of the implementation of intersectoral collaboration in the three countries. The following definition of Intersectoral Collaboration for Health was used: “*a recognized relationship between a part or parts of the health sector with a part or parts of another sector, which has been formed to take action on an issue to achieve health outcomes in a way that is more effective, efficient or sustainable than could be achieved by the health sector acting alone*” [18]. It was assessed in terms of the purpose of the collaboration (Nature of Collaboration), how they collaborated (Collaboration Dynamics), and the stakeholders who were formally engaged within each sector (Key Stakeholders).

## Results

The nature and the dynamics of collaboration as well as the stakeholders who were engaged in the national responses to the COVID-19 pandemic are presented in Table 1. In all three countries, there was evidence of intersectoral collaboration in their national responses to the pandemic. In each country, the Ministry of Health had the overall responsibility for their health sector, including developing and overseeing the implementation of policies [19]. The countries utilized a national coordinating or executive committee, led by the Health Ministry. The latter engaged the following key stakeholders at local/regional and national levels: other public sector actors, private/corporate sector, private/non-profit, academic institutions, and international agencies led by PAHO/WHO. Intersectoral collaboration was used primarily to facilitate data-driven, evidenced-informed decision-making and guidelines; to expand clinical care capacity and strengthen the national medical response; and to provide support for the most vulnerable populations (Table 1).

The collaborative dynamics comprised strong and broad interrelationships among the various sectors. These collaborations included diverse strategies, platforms, and mechanisms to promote intersectoral collaboration, facilitate inter-institutional consensus, and support regional and local authorities in decision-making. For example, the participation of academia in committees included providing evidence and consulting for policymaking, *inter alia* [20, 38]. This dynamic facilitated the conduct of research, and the manufacture of medical supplies through research development and partnerships with industry [20, 34, 41]. Other key actors were involved in production chains and logistic optimization services, lending their networks and expertise to produce COVID-19-related supplies [20]; and strengthening national networks of laboratories to facilitate timely diagnosis/tracking of positive cases [20, 34]. These collaborations also expanded clinical care capacity through donations of medical supplies and funding-related activities [19, 20, 22, 24]. Collaborative efforts also focused on providing support and relief for the most vulnerable populations, such as through financing activities, ensuring food security, and enhancing information and communication technology (ICT) services to address the socioeconomic impacts of the pandemic [21–24, 26, 32, 33].

## Discussion

The three case studies demonstrated the value of intersectoral collaborative action in supporting countries' COVID-19 responses. These examples can be used by country officials to institutionalize intersectoral

collaboration as a strategy to facilitate transparent health decision-making, especially in addressing equity in health and access to services. These lessons are timely as countries prepare for the next public health emergency.

The scope of this report was limited by the paucity of publications in which the collaborative mechanisms in LAC countries' responses to the COVID-19 pandemic were documented. Initially, the intention was to examine integrative governance and Health in All Policies in LAC countries' response to the pandemic, in addition to intersectoral collaboration. However, no relevant reports were identified. It should also be noted that the reports that were identified and analysed for intersectoral collaboration did not refer to the SPRP and did not always provide the desired level of pertinent details to fully understand the countries' collaborative actions.

Even so, we believe that the WHO's SPRP and its complementary operational plan were appropriate for understanding the collaborative processes in the countries. Future reports should also consider incorporating frameworks from non-health disciplines to obtain a more comprehensive view of the structure and challenges faced in implementing intersectoral collaborative action to address health emergencies. This is important considering the complexity of the dynamics associated with health emergencies, which comprise economic, social, educational, and public health dimensions.

We recommend that multi-country, multi-disciplinary quantitative and qualitative studies be conducted to interrogate collaborative mechanisms in LAC. For instance, key informant interviews can provide greater depth on the collaborative response to the pandemic. Studies should address the presence as well as the facilitators and barriers of intersectoral collaboration, in addition to integrative governance and Health in All Policies in countries' responses to the pandemic. These studies would identify more specific lessons for future health emergencies. Additionally, while intersectoral collaboration was expected to benefit indicators such as mortality and morbidity, these were not assessed in the present study but should be examined in future research. Finally, cross-country learning exchanges are recommended to identify and promote the adoption or adaptation of promising practices as part of the ongoing preparedness efforts for future health emergencies.

## Conclusion

There was evidence of dynamic intersectoral collaboration in the three countries' COVID-19 response led by the Ministry of Health and including other government agencies, private sector, non-profit organizations, academia, and international agencies. The collaborations

**Table 1** Nature and dynamics and key stakeholders involved in intersectoral collaboration to guide the COVID-19 response in Colombia, Costa Rica, and Trinidad and Tobago

Country	Nature of Collaboration	Collaboration Dynamics	Key Stakeholders (Sectors) Involved
Colombia	<p><b>Facilitation of data-driven, evidenced-informed decision-making and guidelines (through research, data analysis, technical assistance, etc.):</b></p> <ul style="list-style-type: none"> <li>• In Cali, georeferencing and epidemiological models helped to identify 'hot areas and case distribution; in Bogotá, predictive mathematical models supported the lockdown and mobility measures [20]</li> <li>• Pan American Health Organization / World Health Organization (PAHO/WHO) provided technical assistance to the Ministry of Health and Social Protection and other sectors in the follow-up and analysis of cases, preventive measures, and the response to COVID-19 [19]</li> </ul> <p><b>Expansion of clinical care capacity to strengthen the national medical response (supplies, equipment for patient care, testing, vaccination, etc.):</b></p> <ul style="list-style-type: none"> <li>• Lab services for COVID-19 testing were provided by universities, e.g. in Bogotá, a private university led a project to provide 100,000 free PCR tests for coronavirus detection to cab drivers, bus drivers, firefighters, delivery workers, etc. [20]</li> <li>• Donations of ventilators, hospital beds, testing supplies, drugs, medical oxygen, and personal protection equipment for emergency rooms and secondary level facilities were made by PAHO/WHO and the private sector [19, 20]; and to cover the cost of training for managing critical care patients [20]</li> <li>• In Cartagena, the national textile industry supported national health bodies in the manufacture of facemasks and personal protection equipment [20]</li> </ul> <p><b>Support/relief for the most vulnerable populations (financing, food security, ICT, etc.):</b></p> <ul style="list-style-type: none"> <li>• In Medellín and Cali, communal kitchens were hosted weekly in collaboration with NGOs and academic networks, with priority given to women, children and vulnerable families [21]</li> <li>• Information and prevention campaigns on gender-based violence, and psychosocial support initiatives related to mental and emotional healthcare were provided, some targeted particularly at women [21]</li> <li>• Health interventions for indigenous communities and migrant populations were promoted and supported by PAHO/WHO as part of collaboration with the Ministry of Health and Social Protection [19]</li> </ul>	<p><b>Public and Private Sector:</b></p> <ul style="list-style-type: none"> <li>• Key actors met virtually (committees, roundtables, etc.) establishing direct and regular communication for coordination. Stakeholders also participated in governmental decision-making forums, becoming directly involved in defining health sector investments and joint public-private actions [20]</li> </ul> <p><b>Private/non-profit:</b></p> <ul style="list-style-type: none"> <li>• The <i>Ernestina Parra Foundation</i> and the <i>Feminist Legal Network</i> developed information and prevention campaigns on gender-based violence and offered psychological and legal assistance to female victims of violent situations [21]</li> </ul> <p><b>Academic institutions:</b></p> <ul style="list-style-type: none"> <li>• Formal spaces for interaction were developed through periodic committees within health secretariats in Bogotá, Cali, and Cartagena to facilitate decision-making and collaboration with academics from universities and schools of public health. These included 'augmenting Colombia's clinical capacity and laboratory testing capacity; providing evidence to inform public health decision-making in response to unfolding events; coordinating actors from different sectors to address common issues; and extending networks and skills to support actions for community reach, technology development, and logistics?' [20]</li> <li>• Food security initiatives to protect vulnerable populations were led by a network of universities led by the University of Antioquia [21]</li> </ul> <p><b>International Agencies:</b></p> <ul style="list-style-type: none"> <li>• PAHO liaised with other in-country UN agencies to lead the health sector response and ensure that the UN system followed a holistic approach to tackling this pandemic and its repercussions, "[19]</li> </ul>	<p><b>Public:</b></p> <ul style="list-style-type: none"> <li>• Ministries of Health and Social Protection; Transportation; and Tourism</li> <li>• Migration Colombia</li> <li>• National Institute of Health Protection</li> <li>• Local Health Secretariats</li> </ul> <p><b>Private/corporate:</b></p> <ul style="list-style-type: none"> <li>• Chamber of Commerce</li> <li>• Textile industry</li> </ul> <p><b>Private/non-profit:</b></p> <ul style="list-style-type: none"> <li>• Ernestina Parra Foundation</li> <li>• Feminist Legal Network</li> </ul> <p><b>Academic institutions:</b></p> <ul style="list-style-type: none"> <li>• University of Antioquia</li> <li>• Public and private universities in large cities in Bogotá, Medellín, Cali, Cartagena</li> </ul> <p><b>International Agencies:</b></p> <ul style="list-style-type: none"> <li>• PAHO/WHO</li> <li>• UN Agencies, e.g., United Nations Population Fund (UNFPA)</li> </ul>

**Table 1** (continued)

Country	Nature of Collaboration	Collaboration Dynamics	Key Stakeholders (Sectors) Involved
Costa Rica	<p><b>Facilitation of data-driven, evidenced-informed decision-making and guidelines (through research, data analysis, technical assistance, etc.):</b></p> <ul style="list-style-type: none"> <li>PAHO/WHO supported the Ministry of Health (MOH) in the follow-up and analysis of cases, preventive measures, and the response to COVID-19 [19]</li> <li>The Projections Committee of the Health Services Situation Roundtable (comprising MOH, University of Costa Rica, and PAHO/WHO) used statistical models in the estimation and analysis of case scenarios and their impact on health services [22]</li> <li>The Costa Rican government convened a process of dialogue with social, business, and municipal organizations to broaden the exchange of proposals, recommendations, and visions to address the national emergency caused by COVID-19. However, this initiative did not produce major benefits [23]</li> </ul> <p><b>Expansion of clinical care capacity to strengthen the national medical response (supplies, equipment for patient care, testing, vaccination, etc.):</b></p> <ul style="list-style-type: none"> <li>PAHO/WHO donated vital supplies such as diagnostic tests, COVID-19 kits, etc., as well as provided training on diagnostic guidelines and technical concerns about diagnostic procedures [22, 24]</li> <li>The National Liquor Factory transformed its production to become a major supplier of alcohol in gel form to meet the growing demand, and the Post Office led its distribution throughout the country. Another remarkable effort was the production of thousands of pieces of hospital clothing by the National Learning Institute [25]</li> </ul> <p><b>Support/relief for the most vulnerable populations (financing, food security, ICT, etc.):</b></p> <ul style="list-style-type: none"> <li>The "Con Vos Podemos" campaign was launched and received financial donations to bring humanitarian aid (food and hygiene kits) to vulnerable populations affected by COVID-19. Members included Government, Municipal Emergency Committees, Costa Rican Banking Association, Federation of Savings and Credit Cooperatives, and Telecommunication Company [22, 24]</li> <li>There was significant effort to prioritize intra- and interinstitutional coordination to facilitate the continuation of the School Feeding Program (SFP) during the pandemic, as a crucial element of the emergency food and nutrition response [26]</li> <li>The Superintendence of Telecommunications established a dialogue with operators to implement the "zero-rating" policy for free access to special education, health, and emergency webpages. It also coordinated with universities and other public entities about the provision of the aforementioned list [23]</li> <li>The Ministry of Science, Innovation, Technology and Telecommunications, and the United Nations Development Programme (UNDP), launched a bio-business platform to promote sustainable entrepreneurship and business [23]</li> </ul>	<p>The Municipalities, through the Municipal Emergency Committees, worked in coordination with the National Emergency Commission for the implementation of strategies to support vulnerable populations, the self-assessment of local government conditions, and the identification of areas to strengthen COVID-19 Prevention Plan</p> <ul style="list-style-type: none"> <li>Local governments and multilateral organizations such as PAHO/WHO coordinated actions to strengthen human resources in prevention</li> </ul> <p><b>Private Sector:</b></p> <ul style="list-style-type: none"> <li>Collaborations among the Directorate of Equity Programs, Directorate of Management and Regional Development, the National Council of Production, and private food suppliers facilitated the continuation of the SFP [26]</li> </ul> <p><b>Academic Institutions:</b></p> <ul style="list-style-type: none"> <li>Formal spaces for interaction were developed through the Projections Committee attached to the Health Services Situation Roundtable to facilitate decision-making and collaboration with university academics</li> </ul> <p><b>International Agencies:</b></p> <ul style="list-style-type: none"> <li>PAHO/WHO participated in the daily meetings of the Emergency Operations Center in the different sectoral operations tables implemented by the government, through active participation and support in actions carried out by these bodies. In addition, it provided technical and logistical support for the review of plans, protocols, and the generation of reports related to COVID-19 containment</li> </ul>	<p><b>Public:</b></p> <ul style="list-style-type: none"> <li>Ministry of Health</li> <li>Ministry of Science, Innovation, Technology and Communication</li> <li>Superintendence of Communications</li> <li>Local government entities</li> </ul> <p><b>Private/corporate:</b></p> <ul style="list-style-type: none"> <li>Costa Rican Banking Association</li> <li>Federation of Savings and Credit Cooperatives</li> <li>Telecommunication Company</li> <li>National Liquor Factory</li> <li>Directorate of Equity Programs</li> <li>Directorate of Management and Regional Development</li> <li>National Council of Production</li> </ul> <p><b>Private non-profit:</b></p> <ul style="list-style-type: none"> <li>Red Cross</li> <li>Private food suppliers</li> </ul> <p><b>Academic Institutions:</b></p> <ul style="list-style-type: none"> <li>University of Costa Rica</li> </ul> <p><b>International Agencies:</b></p> <ul style="list-style-type: none"> <li>UNDP</li> <li>PAHO/WHO</li> </ul>

**Table 1** (continued)

Country	Nature of Collaboration	Collaboration Dynamics	Key Stakeholders (Sectors) Involved
Trinidad and Tobago	<p><b>Facilitation of data-driven, evidenced-informed decision-making and guidelines (through research, data analysis, technical assistance, etc.):</b></p> <ul style="list-style-type: none"> <li>PAHO/WHO collaborated with the World Bank and Inter-American Development Bank (IDB) to provide technical support to the MOH as well as helped to implement the communication plan, and participated in national press conferences to provide ongoing updates [19]</li> <li>Ministry of Labour and the Industrial Relations Advisory Committee convened stakeholder consultations with trade unions and businesses to develop workplace policies for vaccination, remote work, etc. [27]</li> </ul> <p><b>Expansion of clinical care capacity to strengthen the national medical response (supplies, equipment for patient care, testing, vaccination, etc.):</b></p> <ul style="list-style-type: none"> <li>MOH utilized campuses of two major universities, University of Trinidad and Tobago (UTT) and The University of the West Indies (The UWI), as step-down facilities within the parallel health-care system [28]</li> <li>The Supermarket Association collaborated with the Ministry of Health (MOH) to establish a vaccination drive for frontline supermarket employees [29, 30]</li> </ul> <p><b>Support/relief for the most vulnerable populations (financing, food security, ICT, etc.):</b></p> <ul style="list-style-type: none"> <li>Citizens whose employment or income was suspended or terminated because of the public health restrictions were assisted through various grants, food cards, etc. Commercial banks offered loan deferral assistance to customers, waived penalty fees, etc. Banks also worked with the government to structure and deliver the stimulus loan facility for small businesses [31]. The Central Bank of Trinidad and Tobago (CBTT) implemented several key measures such as interest rate reductions [32]</li> <li>The National AIDS Coordinating Committee (NACC) collaborated with NGOs and other agencies in relief efforts to mitigate the impact of restricted access to care for People Living with HIV (PLHW) [33]</li> </ul>	<p><b>Public Sector:</b></p> <ul style="list-style-type: none"> <li>Formal, intersectoral operational structures were established or activated, e.g., a Cabinet-approved inter-ministerial task force [34]; a core team including the Minister of Health and Minister of National Security [35]; and Tobago's 'New Normal' Task Force [36]</li> <li>The COVID Emergency Operation Centre was led by the MOH and worked closely with the inter-ministerial task force to ensure a collaborative approach for the management of the national response. An "all-of-government" approach was used to implement key mitigation and containment strategies. These included "data-driven, evidenced-informed decision-making and guidelines from the MOH; the provision of financial resources from the Ministry of Finance; border/immigration restrictions implemented by the Ministry of National Security; remote work and pandemic leave policies prepared by the Ministry of Labour; the provision of social support services by the Ministry of Social Development and Family Services; and communications coordinated by the Ministry of Communications" [34]</li> </ul> <p><b>Private Sector and NGOs:</b></p> <ul style="list-style-type: none"> <li>Local manufacturers and other agencies locally produced supplies for healthcare workers, including hand sanitizers, face shields, and face masks, to bolster availability [34]</li> <li>NGOs and other partners also provided thousands of free face masks to the public [37], including <i>Foundation for the Enhancement &amp; Enrichment of Life (FEEL)</i>, and graduates and tutors of the <i>Youth Training and Employment Partnership Programme (YTEPP)</i>, a vocational training organization</li> </ul> <p><b>Academic Institutions:</b></p> <ul style="list-style-type: none"> <li>The UWI provided critical support such as making their laboratory facilities available to the government; training local nurses to address shortages; and conducting research to provide evidence for decision-making [34]</li> <li>The UWI COVID-19 Task Force was also established to act on the Campus COVID-19 Response Plan, guided by the MOH and Caribbean Public Health Agency (CARPHA) [38]</li> </ul> <p><b>International Agencies:</b></p> <ul style="list-style-type: none"> <li>PAHO/WHO played an advisory role to the government throughout the pandemic and facilitated access to training, vaccines and supplies [19, 39]</li> <li>CARPHA supported access to vaccines in partnership with PAHO/WHO, with funding from the European Union [40]</li> </ul>	<p><b>Public:</b></p> <ul style="list-style-type: none"> <li>Ministries of Health; National Security; Finance; Labour; Social Development and Family Services; and Communications</li> <li>CBTT</li> <li>NACC</li> </ul> <p><b>Private/corporate:</b></p> <ul style="list-style-type: none"> <li>Commercial banks</li> <li>Supermarket Association</li> <li>Business Chambers</li> </ul> <p><b>Private/non-profit:</b></p> <ul style="list-style-type: none"> <li>Industrial Relations Advisory Committee</li> <li>Trade Unions (Joint Trade Union Movement); Federation of Independent Trade Unions and NGOs)</li> <li>NGOs that serve PLHW</li> <li>FEEL</li> <li>YTEPP</li> </ul> <p><b>Academic Institutions:</b></p> <ul style="list-style-type: none"> <li>The UWI</li> <li>UTT</li> </ul> <p><b>International Agencies:</b></p> <ul style="list-style-type: none"> <li>PAHO/WHO</li> <li>CARPHA</li> <li>World Bank</li> <li>IDB</li> <li>European Union</li> </ul>

focused on provision of evidence to guide decision making; increasing the supply of goods, equipment and services for clinical care; and providing support for the most vulnerable. Research is needed to evaluate the impact of specific collaborative strategies and processes on health outcomes as well as to determine whether intersectoral collaboration for health continued after the pandemic.

#### Acknowledgements

Not applicable.

#### Authors' contributions

DTS and MdH conceptualized the study. DTS, MdH, VC, SH and KB contributed significantly to the literature search, analysis, drafting and revision of the manuscript. All authors also approved the submitted version and have agreed both to be personally accountable for their own contributions and to ensure that questions related to the accuracy or integrity of the paper are appropriately investigated, resolved, and the resolution documented in the literature.

#### Funding

The study was not funded.

#### Availability of data and materials

No datasets were generated or analysed during the current study.

#### Declarations

#### Ethics approval and consent to participate

Not applicable, as no data were collected.

#### Consent for publication

Not applicable.

#### Competing interests

The authors declare no competing interests.

Received: 25 March 2024 Accepted: 16 July 2024

Published online: 06 August 2024

#### References

- United Nations. Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters [Internet]. United Nations; 2005. Report No.: Extract from the final report of the World Conference on Disaster Reduction (A/CONF.206/6). Available from: [https://www.preventionweb.net/files/1037\\_hyogoframeworkforactionenglish.pdf](https://www.preventionweb.net/files/1037_hyogoframeworkforactionenglish.pdf). Cited 2022 Jun 5.
- World Health Organization. Strengthening pandemic influenza preparedness and response. Fifty-eighth World Health Assembly, Geneva; 2005. Report No.: Resolution WHA58.5. Available from: [https://apps.who.int/gb/ebwha/pdf\\_files/WHA58/WHA58\\_5-en.pdf](https://apps.who.int/gb/ebwha/pdf_files/WHA58/WHA58_5-en.pdf). Cited 2022 Jun 5.
- World Health Organization. Health action in relation to crises and disasters, with particular emphasis on the earthquakes and tsunamis of 26 December 2004. Fifty-eighth World Health Assembly, Geneva: World Health Organization; 2005. Report No.: Resolution WHA58.1. Available from: [https://apps.who.int/gb/ebwha/pdf\\_files/WHA58-REC1/english/A58\\_2005\\_REC1-en.pdf](https://apps.who.int/gb/ebwha/pdf_files/WHA58-REC1/english/A58_2005_REC1-en.pdf). Cited 2022 Jun 5.
- World Health Organization. Emergency preparedness and response [Internet]. Fifty-ninth World Health Assembly, Geneva; 2006. Report No.: Resolution WHA59.22. Available from: [https://apps.who.int/gb/ebwha/pdf\\_files/WHA59/A59\\_R22-en.pdf](https://apps.who.int/gb/ebwha/pdf_files/WHA59/A59_R22-en.pdf). Cited 2022 Jun 5.
- World Health Organization, editor. Toolkit for assessing health-system capacity for crisis management: strengthening health-system emergency preparedness. Copenhagen: World Health Organization, Regional Office for Europe; 2012. p. 86.
- Andrus JK, Evans-Gilbert T, Santos JI, Guzman MG, Rosenthal PJ, Toscano C, et al. Perspectives on battling COVID-19 in countries of Latin America and the Caribbean. *Am J Trop Med Hyg*. 2020;103(2):593–6.
- González LZ. Indirect governance of transnational crises: The PAHO and WHO response to the COVID-19 pandemic in Latin America. *Global Governance: A Review of Multilateralism and International Organizations*. 2021;27(4):587–606.
- Vélez CM, Aguilera B, Kapiriri L, Essue BM, Nouvet E, Sandman L, et al. An analysis of how health systems integrated priority-setting in the pandemic planning in a sample of Latin America and the Caribbean countries. *Health Res Policy Syst*. 2022;20(1):58.
- Acosta LD. Response capacity to the COVID-19 pandemic in Latin America and the Caribbean. *Pan Am J Public Health*. Available from: <https://www.paho.org/journal/en/articles/response-capacity-covid-19-pandemic-latin-america-and-caribbean>. Cited 2022 Jun 3.
- Bradley DT, Mansouri MA, Kee F, Garcia LMT. A systems approach to preventing and responding to COVID-19. *EclinicalMedicine*. 2020;21: 100325.
- Hassan I, Obaid F, Ahmed R, Abdelrahman L, Adam S, Adam O, et al. A Systems Thinking approach for responding to the COVID-19 pandemic. *East Mediterr Health J*. 2020;26(8):872–6.
- Savigny D de, Adam T, Alliance for Health Policy and Systems Research, World Health Organization. Systems thinking for health systems strengthening / edited by Don de Savigny and Taghreed Adam. Pour une approche systématique du renforcement des systèmes de santé / édité par Don de Savigny et Taghreed Adam. 2009. p. 107.
- Stansfield J, South J, Mapplethorpe T. What are the elements of a whole system approach to community-centred public health? A qualitative study with public health leaders in England's local authority areas. *BMJ Open*. 2020;10(8): e036044.
- World Health Organization. Regional Office for Europe. Multisectoral and intersectoral action for improved health and well-being for all: mapping of the WHO European Region. Governance for a sustainable future: improving health and well-being for all: final report [Internet]. World Health Organization. Regional Office for Europe; 2018. 83 p. Available from: <https://apps.who.int/iris/handle/10665/341715>. Cited 2022 Jun 27.
- World Health Organization. COVID-19 Strategic Preparedness and Response Plan (SPRP 2021). 2021. Available from: <https://www.who.int/publications/i/item/WHO-WHE-2021.02>. Cited 2022 Jun 5.
- World Health Organization. Operational planning guidance to support country preparedness and response. 2020. Available from: <https://www.who.int/publications-detail-redirect/draft-operational-planning-guidance-for-un-country-teams>. Cited 2022 Jun 5.
- Pan American Health Organization. Framework for the response of integrated health service delivery networks to COVID-19. 2020. Available from: [https://iris.paho.org/bitstream/handle/10665.2/52269/PAHOIMSHSSHSCOVID-19200021\\_eng.pdf?sequence=1&isAllowed=y](https://iris.paho.org/bitstream/handle/10665.2/52269/PAHOIMSHSSHSCOVID-19200021_eng.pdf?sequence=1&isAllowed=y). Cited 2022 Jun 5.
- Kirch W, editor. Intersectoral Cooperation. In: *Encyclopedia of Public Health*. Dordrecht: Springer Netherlands; 2008. p. 808–808. Available from: [https://doi.org/10.1007/978-1-4020-5614-7\\_1862](https://doi.org/10.1007/978-1-4020-5614-7_1862). Cited 2024 Jul 5.
- Pan American Health Organization. Pan American Health Organization Response to COVID-19 in the Americas. January to December 2020. 2021. Available from: <https://iris.paho.org/handle/10665.2/54013>. Cited 2024 Jul 4.
- Turner S, Ulloa AM, Niño N, Valencia GV. The role of intersectoral action in response to COVID-19: a qualitative study of the roles of academia and the private sector in Colombia. *Int J Health Policy Manag*. 2021;30:1.
- Duque Franco I, Ortiz C, Samper J, Millan G. Mapping repertoires of collective action facing the COVID-19 pandemic in informal settlements in Latin American cities. *Environ Urban*. 2020;32(2):523–46.
- Pan American Health Organization. Costa Rica: Pandemia COVID-19 - Informe estratégico mensual No 4. 2020. Available from: <https://www.paho.org/es/documentos/costa-rica-pandemia-covid-19-informe-estrategico-mensual-no-4>. Cited 2022 Jul 7.
- Enríquez A, Sáenz C. Primeras lecciones y desafíos de la pandemia de COVID-19 para los países del SICA [Internet]. Ciudad de México: Comisión Económica para América Latina y el Caribe (CEPAL); 2021 p. 106. (serie Estudios y Perspectivas-Sede Subregional de la CEPAL en México, N° 189 (LC/TS.2021/ 38; LC/MEX/TS.2021/5)). Available from: <https://repositorio.cepal.org/server/api/core/bitstreams/8dd0856e-e8a6-470f-b864-38fbf96f8cd5/content>

24. Pan American Health Organization. Costa Rica: Pandemia COVID-19. Informe estratégico mensual No 2 Período del 7 de Abril al 6 de Mayo de 2020. Costa Rica; 2020 p. 53. Available from: <https://docs.bvsalud.org/biblioref/2021/03/1151266/cr-informe-covid-19-2.pdf>.
25. United Nations. Cinco razones por las que Costa Rica afronta con éxito la pandemia de coronavirus. Noticias ONU. 2020. Available from: <https://news.un.org/es/story/2020/06/1475862>. Cited 2022 Jul 7.
26. Colón-Ramos U, Monge-Rojas R, Weil JG, Olivares GF, Zavala R, Grilo MF, et al. Lessons Learned for Emergency Feeding During Modifications to 11 School Feeding Programs in Latin America and the Caribbean During the COVID-19 Pandemic. *Food Nutr Bull.* 2022;43(1):84–103.
27. Industrial Relations Advisory Committee. Policy Guidelines on Remote Work in Trinidad & Tobago. 2020.
28. Ministry of Health Trinidad and Tobago. COVID-19 Daily Update - Monday May 31st, 2021. 2021. Available from: <https://health.gov.tt/~healthgov/covid-19-daily-update-monday-may-31st-2021>. Cited 2024 Jul 7.
29. Ghourlal D. Supermarket, pharmacy workers get vaccinated. Loop News Trinidad and Tobago; 2021. Available from: <https://tt.loopnews.com/content/supermarket-pharmacy-workers-get-vaccinated>. Cited 2023 Nov 21.
30. Loop Trinidad and Tobago. Supermarket Association establishes mass vaccination site. Loop News. 2021. Available from: <https://tt.loopnews.com/content/supermarket-association-establishes-mass-vaccination-site>. Cited 2023 Nov 21.
31. Bankers Association of Trinidad and Tobago. How commercial banks steered during COVID-19. Available from: [https://www.central-bank.org.tt/sites/default/files/page-file-uploads/4\\_How\\_commercial\\_banks\\_steered\\_during\\_COVID\\_19%20\\_BATT\\_Article\\_4.pdf](https://www.central-bank.org.tt/sites/default/files/page-file-uploads/4_How_commercial_banks_steered_during_COVID_19%20_BATT_Article_4.pdf). Cited 2023 Nov 21.
32. Central Bank of Trinidad and Tobago. COVID-19 Response Updates. Available from: <https://www.central-bank.org.tt/core-functions/supervision/covid-19-response-updates>. Cited 2023 Nov 21.
33. Sebro A. National AIDS Coordinating Committee collaborated with NGOs for continuity of HIV services during COVID-19. 2020. Available from: <https://pancap.org/national-aids-coordinating-committee-collaborated-with-ngos-for-continuity-of-hiv-services-during-covid-19/>. Cited 2023 Nov 21.
34. Hunte SA, Pierre K, St Rose R, Simeon DT. Health Systems' Resilience: COVID-19 Response in Trinidad and Tobago. *Am J Trop Med Hyg.* 2020;103(2):590–2.
35. Pooransingh S, Yoosuf AA, Moosa S, Ahmed N, Jankie S, Pereira LP. Early COVID-19 response in two small island developing states: Maldives and Trinidad and Tobago. *Western Pac Surveill Response J.* 2022;13(1):1–7.
36. Loop Trinidad & Tobago. THA chief secretary appoints 12-member "New Normal" Task Force. Loop News. 2021 Jul 19; Available from: <https://tt.loopnews.com/content/tha-chief-secretary-appoints-12-member-new-normal-task-force>. Cited 2024 Jul 7.
37. Haldane V, Morales-Vazquez M, Jamieson M, Veillard J, Marchildon GP, Allin S. Learning from the first wave of the COVID-19 pandemic: Comparing policy responses in Uruguay with 10 other Latin American and Caribbean countries. *Health Policy OPEN.* 2022;3: 100081.
38. The University of the West Indies, St. Augustine, Trinidad. Protecting The UWI St. Augustine Community. Coronavirus (COVID-19). 2020. Available from: <http://sta.uwi.edu/covid19/>. Cited 2024 Jul 7.
39. Pan American Health Organization. The PAHO Revolving Fund facilitates access to vaccination supplies to six countries of Latin America and the Caribbean. 2022. Available from: <https://www.paho.org/en/news/10-8-2022-paho-revolving-fund-facilitates-access-vaccination-supplies-six-countries-latin>. Cited 2024 Jul 7.
40. CARICOM (Caribbean Community). CARPHA Partners with PAHO to Ensure Caribbean States' Equitable Access to COVID-19 Vaccine. 2020. Available from: <https://caricom.org/carpha-partners-with-paho-to-ensure-caribbean-states-equitable-access-to-covid-19-vaccine/>. Cited 2024 Jul 7.
41. Haldane V, De Foo C, Abdalla SM, Jung AS, Tan M, Wu S, et al. Health systems resilience in managing the COVID-19 pandemic: lessons from 28 countries. *Nat Med.* 2021;27(6):964–80.

## Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.