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Comparative health governance in Latin America: the case of national policy decisions during pandemic response in five countries

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Title:

Comparative health governance in Latin America: the case of national policy decisions during pandemic response in five countries

Abstract:

Context: Little is known about pandemic response in Latin America. The aim of this study was to compare key COVID-19 response measures taken by five Latin American countries to understand what elements of public governance are needed for more effective policy strategies, and to inform future pandemic preparedness.

Methods: Using a qualitative, iterative approach guided by a governance framework, we analyzed the most salient characteristics of each country's response (restriction, sanitary, and social protection measures).

Findings: A focus on transparency and inclusion, together with attention to the primary level of care, appeared to be more prominent in countries with less Covid-19 incidence and mortality such as Argentina and Costa Rica. In contrast, Brazil, Chile, and Ecuador, with more fragmented and segmented health systems, coupled with less transparency and participatory decision making, were more severely impacted.

Conclusions: Pandemic preparedness may benefit from emphasizing organizational, institutional, and informational elements of governance. Since data is essential to decision making in an evolving pandemic, the flow of information interacts with different elements of governance; therefore, more attention should be placed on the relation of the informational dimension with the organizational and institutional dimensions.

Key words: Pandemic preparedness; health governance; health policy; COVID-19; Latin America

Highlights:

Differences in governance help to explain diverse pandemic impacts. (66 characters)

Fragmented and health systems may result in less effective decisions. (69 characters)

Countries with the best outcomes had more inclusive governance structures. (75 Characters)

Transparent data sharing leads to improved cooperation among stakeholders. (75 Characters)

Introduction

Inquiry into governance, decision-making and health policy responses in times of crisis is an important interest of health policy and systems (HPS) research, since it aids in informing and strengthening system change by exposing potentially inherent capacities for transformation [1]. Although responses to the Covid-19 pandemic have been documented and analyzed particularly in high-income countries [2–4], less is known about pandemic response in low- and middle-income countries. In the Latin American region, we have yet to document and critically examine the lifecycle of the pandemic response;

specially during its most crucial, early stages of 2020, when the severe onslaught of rapid transmission could have been diminished. Globally, the devastating impacts of the Covid-19 pandemic have been correlated with disparities and exclusion in contexts of social injustice, but inequity and discrimination alone cannot explain the differences of impact between countries with similar socioeconomic conditions. The Covid-19 crisis has been described as, essentially, a "failure of governance" [5], requiring a closer look at how different elements of governance interact in decision making and their potential impacts. Comparative national policy analyses have the potential to help identify "critical governance influences over responses" that are not obvious in single-country studies to draw lessons into the future [1], including to improve standards and guidelines for emergency preparedness regionally or globally.

While we now know that effective COVID responses depended on social isolation, distribution of personal protective equipment, and access to early testing [6], many questions arise about the timing of implementation and length that each policy should remain to be effective. Retrospection has given us the hindsight to understand that effective response had to include isolating the virus, and thus those who were carrying it, while maintaining some level of socio-economic functioning. COVID hit the most vulnerable who couldn't work from home, isolate or take on preventive measures [7]. Yet from the perspective of a national or state government, when to implement a stay-at-home order, and for how long, can have profound impacts on mortality rates and therefore should be studied carefully. Similarly, in a context of limited resources, choosing to invest in contact tracing and test distribution over improving hospital capacity, is indeed a difficult question to answer.

Latin America was one of the regions that had at least one month to prepare after the initial warning by the World Health Organization (WHO) on January 30, 2020,

when it declared a Public Health Emergency of International Concern due to Covid-19 [8]. Nevertheless, countries in Latin America were among the most severely impacted countries in the world during 2020 [9]. By July 5, 2020, Chile, Brazil, and Ecuador had a record number of confirmed Covid-19 deaths per million people (pmp), 330, 305 and 271, respectively, while Argentina and Costa Rica had much lower rates, 33 and 4 pmp, respectively (Table 1). Deaths per cases give evidence of a more complex scenario, in which a country with high testing such as Chile had 2.13 deaths per cases while Ecuador had as many as 7.72 deaths per cases on the same date (Table 1).

--- Insert Table 1 here ---

Table 1. Demographic and socioeconomic indicators - Argentina, Brazil, Chile, Costa Rica, and Ecuador.

Country	Population 2020 (thousands)	Pop* 65 years and older (%)	Pop Urban (%)	Pop Afro descendant (%)	Pop Indigenous (%)	GDP per capita (US$)	Pop in Poverty (%)	Pop in Extreme Poverty (%)	Gini Coefficient (Income inequality)	Illiteracy (% Pop 15 years and older)	Pop with drinking water (%)	Pop with sanitation services (%)
	2020	2020	2020	2018	2018	2018	2018	2018	2018	2018	2017	2017
Argentina	45 196	11.4	92.5	0.4%	2.3%	10 105	24.4	3.6	0.396	1.1	NA	NA
Brazil	212 559	9.6	86.9	50.9%	0.4%	10 905	19.4	5.4	0.540	6.9	92.3	49.3
Chile	19 116	12.2	89.7	NA*	NA	15 443	10.7	1.4	0.454	3.6	98.6	77.5
Costa Rica	5 094	10.3	80.8	7.8%	2.4%	9 960	16.1	4.0	0.493	NA	93.8	NA
Ecuador	17 643	7.6	66.1	7.2%	7.0%	5 253	24.2	6.5	0.454	15.7	75.1	42.0

*** Abbreviations:** Pop = Population; NA = not available.
Sources: https://population.un.org/wpp/DataQuery; https://www.worldbank.org/en/topic/poverty/lac-equity-lab1/ethnicity/ip-population; https://washdata.org (Accessed 13 June 2020).

Social inequity certainly played a role in the impact of the pandemic. Brazil showed higher mortality in poor municipalities, among the least educated and blacks, and indigenous groups [10] demonstrating the impact of social determinants of health on unequal access to quality healthcare services, morbidity, and mortality. Similarly, in Santiago de Chile five districts with the highest rates of multidimensional poverty reached a mortality rate of 60 per 1,000 people; in contrast, the five districts with the

lowest poverty rates had a mortality rate of 39 per 1,000 people [11]. In Ecuador, the excess death factor (EDF) in indigenous populations was 2.2 compared to 1.36 in the predominant mestizo group, and the EDF in indigenous women was higher than in indigenous men between 20 and 50 years [12]. Concurrently, although Argentina and Costa Rica do not have largely dissimilar socioeconomic conditions when compared to the other three countries, they had less severe mortality rates in general during 2020 [13].

It has been well documented that Latin America suffers from systemic weaknesses in governance, with limits to public integrity, open government data sharing, policy coordination and strategic planning [14,15], all of which have been said to negatively influence and effective response to the pandemic. Therefore, it was predicted that the region would be severely affected due to "chronic understaffing and a lack of modern medical equipment and diagnostic and therapeutic consumables, including personal protective equipment" [16,17]. Indeed, the COVID-19 pandemic's onslaught in Latin America was subsequently described as a humanitarian crisis [18], "borne out of political instability, corruption, social unrest, fragile health systems, and perhaps most importantly, longstanding and pervasive inequality—in income, health care, and education." Understanding the governance of the Covid-19 health emergency, in the context of sanitary restrictions and social protection measures, remains an unexplored area of research in Latin America, and such knowledge is essential to prepare for and confront the next pandemic crisis. The aim of this study was to compare key COVID-19 response measures taken by five Latin American countries (Argentina, Brazil, Chile, Costa Rica and Ecuador) to understand what elements of public governance are needed for more effective policy strategies, and to inform future pandemic preparedness.

Methods

Convening the Research Team

The team of researchers initially met via the launching of a COVID-19 commission for the Journal of Global Health Sciences. Through a snowball method we recruited researchers from the five selected countries. Researchers were brought on to the team because of their experience in designing or conducting research on aspects of health systems in their respective countries. We met virtually, weekly, or bi-weekly to discuss the framework for analysis to better understand the pandemic response in each country, compare them with each other, summarize findings, and make recommendations.

Country selection

We included Latin American countries that varied in size, region, and form of government. The countries selected for this study have relatively different forms of government. Chile, Ecuador, and Costa Rica have unitary governments, while Argentina and Brazil are federal. Each country in the study represents a continuum of population sizes (Supplemental Table 1), where Costa Rica has a population of 5 million and Brazil more than 200 million inhabitants. The countries with the highest public spending on health are Argentina and Costa Rica, which invest 6.6% and 5.4% respectively of their gross domestic product (GDP). Brazil, Ecuador, and Chile do so in lesser proportions (4%, 4.4%, and 4.5% of their GDP, respectively) with high out-of-pocket expenses that can reach up to 50% of total health spending (Supplemental Table 2).

The five Latin American countries share deep social inequalities and similar population health profiles and had recently withstood various political, social, or

economic crises. Brazil, the largest and most populated country, suffers from deep health inequities between and within regions [19], having the highest Gini coefficient (an indicator of income inequality among population quintiles) of the five countries, 0.54, in 2018 (Supplemental Table 1). Ecuador and Chile replicate similar inequities, while Argentina had the lowest Gini coefficient of all, 0.396, that year (Supplemental Table 1).

Analytical framework

We analyzed governance using Rajan et al's framework [20] regarding its institutional dimensions (government leadership and credibility, decentralization, and inclusion of civil society) and operational dimensions (intersectoral coordination, minority inclusion, and consultation of experts and civil society or community groups), and using Soma et al's framework [21] regarding its informational dimensions (scientific evidence, data transparency, and decisions). The informational dimensions are adapted from the field of environmental studies with the interest of exploring their usefulness for health policy and decision-making analysis, especially considering that information flows may influence and interacting with other dimensions of governance [21] .

Recommendations on pandemic preparedness [22] have assumed that limitations in resources do not necessarily result in limited capacity to respond; in other words, the expectation is that, if a government acts effectively, the impacts of a dramatic health crisis can be diminished even in low-resource contexts through adequate governance. This does not mean that only error-less governance can have positive results; governance requires understanding which mechanisms have the "desired outcomes" and, therefore, learning from making mistakes [23]. In times of uncertainty, such an approach means that, as the Covid-19 pandemic evolved, it was expected that

governments would change the course of the response using a variety of measures or adopting measures differently depending on results –not that they always or mostly made the right decisions. However, correcting, evolving and reacting is dependent on how this is allowed or promoted by a country's governance structure [23] (Chhotray and Stoker, 2009).

As with any infectious disease, health system measures comprise efforts to test, trace contacts and support patient isolation, alongside increasing hospital capacity to admit a potentially surging number of patients. Chhotary and Stoker argue against "good governance" principles such as the need for transparency and democratic deliberation for decision making when these are viewed as a form of information sharing. Instead, they argue, what should be favored is accountability through forms of "genuine power sharing" [23].

At its simplest, transparency has been a major point of contention during the Covid-19 pandemic in many countries, with lack of data posing strategic dilemmas in governance responses: a pandemic requires to identify cases and trace contacts, to understand the trajectory of contagion, and therefore data sharing and knowledge of data are crucial. At its most complex, it may be assumed that the governance of the response relies on informing policy actions. We approach this study by re-conceptualizing governance to include dimensions that appear as relevant to address the complexity of a pandemic requiring strategies that are both health specific and transcending the health sector.

Data Analysis

This study uses a qualitative, iterative approach, in which we, as authors connected at the beginning of the Covid-19 pandemic in 2020, with the intention of monitoring and

discussing governance responses in the countries where we conduct research on health services and systems. We met virtually and periodically to discuss our findings and obtain peer feedback using a narrative method, i.e., describing in writing the most salient aspects of the data with the rest of the group, deciding which should be included, categorizing, and analyzing, and making comments on each other's analysis. Preliminary findings were presented in an organized session at the Health Systems Research 2020 Symposium, where the group received further feedback.

For context, we first identify the most salient characteristics of each country response (restriction, sanitary, and social protection measures), followed by examining each dimension of governance separately. In the discussion, we compare results from each country. Publicly available data were obtained from verified media sources with which we were familiar, official government reports, and other sources such as information dashboards and public discussions and declarations. We are all active in Covid-19 research and advocacy, focusing on understanding the pandemic response and making policy recommendations in the region of the Americas.

Results

Public health and social protection measures

Restriction measures

All the countries in this study applied international travel restrictions in March of 2020 (Table 2), followed by the closing of schools, the suspension of public events, and work-from-home measures. Costa Rica did not implement a general lockdown or curfew and, instead, requested voluntary isolation from the population and imposed vehicle restrictions [24]. Restriction measures in Chile, such as lockdowns and curfews,

were imposed but not adhered to by the population due to basic subsistence needs and lack of credibility of authorities [25,26]. In Argentina, a strict lockdown was implemented early on, which managed to delay the incidence of cases, but the population progressively began to resume activity due to economic needs. Ecuador opted for a two-month national lockdown that initially appeared to prevent the spreading of COVID-19 to the rest of the country, however people still moved around, especially in places of high concentration of people such as markets and areas of the country with limited public control [27]. The pandemic in Ecuador continued to grow progressively throughout the country, although more slowly than in the first stage of the pandemic [28]. In Brazil, amid internal conflicts and a lack of collaboration between different government levels, several states and municipalities enacted social distancing rules [29], with weak implementation and social adherence. By May, trade, office work, and other activities resumed, despite the continuous increase in the number of cases and deaths from COVID-19.

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Table 2. Additional public health indicators - Argentina, Brazil, Chile, Costa Rica, and Ecuador.

Country	Life Expectancy at Birth	Infant Mortality Rate (per 1000 live births)	Maternal Mortality Rate (per 100,000 live births)	Total Mortality Rate (per 100.000 people)	Government Health Expenditures (%GDP)	Total Health Expenditures (% GDP)
	2015-2020	**2015-2020**	**2017**	**2015**	**2017**	**2017**
Argentina	76.4	10.2	39	566.3	6.6	9.1
Brazil	75.6	13.0	60	606.2	4.0	9.5
Chile	80.0	6.7	13	443.4	4.5	9.0
Costa Rica	80.0	7.3	27	394.4	5.4	7.3
Ecuador	76.7	13.6	59	439.2	4.4	8.3

Sources: https://population.un.org/wpp/DataQuery; http://apps.who.int/ghodata/?vid=110# (Accessed 13 June 2020).

Health care measures

Argentina initially focused on implementing a strict lockdown, preparing the hospital response, and containing viral transmission in overcrowded communities, especially among vulnerable populations in the capital city of Buenos Aires. Shortly afterwards, similar measures where extended to other areas of the country, focusing on systematic testing and tracing of close contacts using a primary health care approach.

In Brazil, the initial response to the COVID-19 pandemic included diverse strategies at the federal, state, and municipal levels, which changed over time. At both the federal and state levels, authorities expanded health services with an emphasis on hospital preparedness. At the state and municipal levels, focus was on health surveillance measures and health services, including hospitals, although inequalities in access and quality between the public and private sectors remained. RT-PCR tests were initially recommended only for hospitalized patients with severe acute respiratory syndrome.

From the beginning, Chile opted for partial lockdowns that changed over time, according to risk, and were limited to specific municipalities. The response emphasized increasing the number of tests for symptomatic people who sought hospital care and increasing the number of critical care beds and ventilators available. Testing, contact tracing, and isolation were not prioritized outside of the capital city [30]. Primary levels of care were not given additional resources or given a leading role in the response.

In Costa Rica, the health response began with a multilevel inter-institutional activation to mobilize local resources. Emphasis was placed on contact tracing and following up on cases outside of the capital city using a primary care approach, which

contributed to flattening the curve. This strategy bought the country some time to improve hospital response capacity. Given the rapidly significant increase in cases, the main challenge lay in containing transmission at a community level, although RT-PCR testing focused on symptomatic patients.

Ecuador's response was marked by limited RT-PCR testing and the lack of a coordinated intersectoral effort at the primary level of care that would focus on prevention and mitigation [31]. The limited reorganization of the secondary and tertiary levels of care (hospitals) and the shortage of personal protective equipment limited an effective response in Ecuador. Daily tests did not increase in proportion to the increasing number of confirmed cases since not all provinces can process samples, which placed limits on the coverage and speed of data processing and reporting. The data, especially hospital data, stayed centralized, making it difficult for municipalities to make informed decisions in real-time.

Social protection measures

The five countries implemented social protection measures including vouchers, subsidies, and food pantries for people from the most vulnerable households, employment protection measures, and support for families and small businesses through strategies such as bill payment relief, reduction of interest rates, and adjustments to payments. In Argentina, where poverty has risen in recent years, it is noteworthy that 49% of the population, equivalent to 89% of households, already had some form of state support before the pandemic, which contributed to mitigating the financial consequences of lockdown [32]. In Brazil, some states and municipalities adopted local protection initiatives. Federal strategies regarding the economy, employment, and social protection were perceived as late and insufficient, considering the deep socioeconomic

inequalities in Brazil [33]. Also, social support programs had severe implementation problems. In Chile, unemployment had reached an unprecedented 28.4% [34]. The social protection measures were considered insufficient and late [35,36], explaining in part the high levels of mobility that were maintained during lockdowns in municipalities with the highest levels of poverty. Costa Rica developed targeted measures to care for minors, women, people with disabilities, indigenous populations, and people experiencing homelessness. Ecuador implemented budget cuts, public layoffs, and wage cuts in addition to job flexibility in the public sector, although it did distribute a small poverty bonus, the main social protection tool of the response [37].

Governance responses

In this section, we discuss the characteristics of governance of the COVID-19 response in three subsections: 1) institutional and operational dimensions, 2) informational dimensions, and 3) inclusion and transparency as two crucial elements to consider when trying to protect those more disproportionately affected by the Covid-19 pandemic and which cross the three different dimensions of governance [20].

Institutional and operational dimensions

Due to having a federal structure, power in Argentina lies at the provincial level. During the previous government, the federal administration on health had integrated into the Ministry of Social Development. This move was reversed by the current administration, thereby strengthening the National Ministry of Health's leadership to coordinate actions with the provinces through the Federal Council of Health. Since the beginning of the pandemic, the Argentine government created a commission of high-level experts in epidemiology to design pandemic response. The Ministry did not

integrate experts from other disciplines, nor did it combine the three main subsectors (social security, state, and private services) to centralize hospital beds allocation.

In Brazil, the Ministry of Health initially played an essential role in coordinating the pandemic response. It organized a National Emergency Committee that integrated state and municipal stakeholders and health experts. However, intragovernmental coordination was limited, reflecting the struggles, and competing political and social interests. Governance problems accompanied the institutional leadership crisis. The Brazilian President questioned and interfered in health decisions [18], leading to two health ministers' changes, thus preventing adequate federal coordination. Military officers were placed in ministerial positions, including an interim health minister.

Before the pandemic, Chile experienced a profound social and political crisis with widespread protests beginning in October of 2019 [38], highlighting the significant loss of credibility of authorities and institutions by the population. In mid-March, the Ministry of Health formed an Advisory Council for the pandemic, made up of renowned specialists. Following public confrontations between the government, mayors, and civil society organizations, a "COVID social council" was formed. Both organizations publicly stated that their recommendations were not being heard by authorities [39].

The Ecuadorian initial response was characterized as fragile [40] and based on de facto herd immunity [31]. The country never had a scientific committee or an intersectoral committee formally delegated with decision-making and accountability to inform and enable transparent monitoring of government policies and actions in an ongoing and systematic fashion [40,41]. The health minister was replaced early in the pandemic, which indicated that her original designation did not correspond to the profile of a person who could manage the health sector.

In Costa Rica, the National Risk Management System operated in conjunction with regional and municipal emergency committees. An Institutional Coordination Center led and coordinated decision-making among authorities from the Ministry of Health, a technical team of Health Risk Management at the subnational level, and the Health Operations Desk. Thematic subgroups brought together different institutions from the education, social and economic sectors. The pandemic hit Costa Rica when it was confronting broader, pre-existing institutional challenges [42], that were exacerbated by the crisis. However, it appears that the strategy of supporting inter-institutional coordination helped to compensate for possible weaknesses in leadership, communication, and internal management, and therefore allowed to make and implement decisions, and inform them to the public. As a result, governmental approval during the early stages of the pandemic increased from 22% to 49.3% [43].

Informational dimensions

In Argentina, press releases were published daily by a coordinated technical team based at the Ministry of Health. Initially, in Brazil, national data were released daily and openly, supported by open data platforms; however, statements by the country's president against social distancing and his interference on technical issues led to conflicts between the national government, and federal and state health authorities [44] . Once presidential influence over health policy grew, federal disclosure of epidemiological information became unstable and sparse, and recommendations were contradictory while civil participation was minimized. Although states provided data regularly, there was much variation in accuracy and transparency between states and municipalities. Despite many cases and deaths, due to limitations in PCR tests, data was

scarce, especially on the most vulnerable populations (black, indigenous, and low-income communities) [45].

In Chile, since the onset of the pandemic, different civil society organizations demanded changes to the governance of the crisis. Multiple spokespersons consistently provided dissenting opinions, and government communications were questioned as erratic, and unreliable [46]. Likewise, lack of transparency in access to information and changes in the criteria for counting cases and deaths were questioned by scientific societies, exacerbating lack of confidence and credibility, which escalated, leading to a change of the minister of health.

In Costa Rica, communication focused on technical aspects and was provided by the Minister of Health. As the primary political spokesperson, the minister held daily press conferences, focused on reporting cases at the national level. Reporting had a risk-centered approach, with the use of infographics and quantitative information, which was key to building public confidence towards crisis management, decreasing misinformation, and combating fake news. Nevertheless, as the pandemic progressed, the public and press demanded more transparency and better access to the data sources and COVID-19 data.

In Ecuador, the health authority changed the counting methodology several times, generating debate and confusion. From the beginning, gaps in official information were identified [40]. In the absence of a central scientific advisory committee, the information was shared, and decisions were made at different entities and levels. Emphasis was made on sharing quantitative data of cases together with a modelling that appeared the curve was flattened early on, but only because of how data were reported, not because incidence was stable or decreasing. Cases were reported according to the onset of

symptoms instead of by date of detection or death by COVID-19. Data on PCR tests were reported with delays due to limited laboratory capacity [31], and were first centralized at the Ministry of Health to be finally made public by the Secretariat of Risk Management. Hospital data, which was more immediate and accurate was, instead, kept private when it could have helped to make better decisions if the national and local governments had been kept informed.

Inclusion and transparency

The question of how much policy makers and politicians in these countries could have considered the "multidimensional effects and needs of society" [20] depended on who they included and who transparent the consultation process was. In this study, the inclusion of experts and civil society are considered within the institutional and organizational dimensions, while transparency on who makes the decisions and how is included in the informational dimension. In this section, we synthesize the characteristics of the governance response in relation to inclusion and transparency in Table 3.

On one side of the spectrum of consultation with experts are Brazil, Chile and Ecuador, which partially or sporadically consulted with different health and public health experts, but this does not imply governments considered their advice, while Argentina and Costa Rica made efforts to consult with experts although focused on biomedical knowledge. Argentina and Costa Rica also shared similar credibility in and leadership from main health authorities; in contrast, Brazil and Chile had a leadership crisis, and there was lack of a clear line of action from the leadership.

Regarding data transparency, Argentina, Brazil, and Costa Rica reported information on cases at least daily, but Brazil had insufficient testing data, particularly

of vulnerable groups. In Chile and Ecuador, information was partial and inconsistent. Knowledge on who was making decisions and how was publicly available in Costa Rica, and partial in Argentina, Brazil, and Chile, but in Brazil decision making remained controversial. Ecuador did not make clear how decisions were made, and these remained centralized.

--- Insert Table 3 here ---

Discussion

Our analysis shows that health systems that were less fragmented and segmented may have resulted in the capacity of the system to make more effective, evidence-based decisions that had the greatest impact on reducing the spread of the virus.

Indeed, how health systems are organized in the different countries analyzed likely played a role in the decisions made during the Covid-19 response. Chile, Ecuador, and Argentina have segmented and fragmented health systems, while Costa Rica and Brazil have a unified public and universal health system. Costa Rica is considered to have the less segmented and fragmented health system of the five countries. Nevertheless, an exploratory analysis of the data also shows that governance factors appeared to be crucial in driving the pandemic response. In the early stages of the pandemic, Ecuador, Brazil, and Chile emphasized strengthening hospital care, with an aim to expand the number of critical care beds, and focused on testing people who sought hospital care. Argentina and Costa Rica, in contrast, favored a strategy of testing, contact tracing, isolation, and engaging primary levels of care outside of the capital city or main urban area.

Argentina had recently elected a new administration, with a high level of popular support and a substantial majority in both the provincial government and legislature. The population complied with the highly restrictive measures, but were relaxed over time, either due to exhaustion or for economic reasons. In Brazil, political conflicts, insufficient federal and intersectoral coordination, and federal leadership limits, in a context of inequalities across regions and between socioeconomic groups, appeared to hamper control of the pandemic. Chile and Ecuador were experiencing instability and conflict; both countries had had massive protests at the end of 2019, which were actively repressed by their central governments and had an impact on trust of and support for authorities. Chile experimented with a strategy relying on flexible lockdowns called "dynamic and gradual," social distancing measures, and stay-at-home orders, which were largely not respected, especially because of subsistence needs. In Ecuador, the two-month national lockdown was loosely applied, with its initial effect waning as the weeks went by. Both Chile and Ecuador lacked effective community surveillance systems to ensure contact tracing and adequate isolation, together with social protection measures that would support families during the lockdown. In Costa Rica, there is evidence of significant discontent and a weakened legitimacy of the government since before the pandemic began [47]. The change in government approval rating during the first year of the pandemic may be associated with the Minister of Health's technical, political, and strategic leadership that focused on managing the national emergency through case monitoring, contact tracing, and community-based care.

Four of the countries in this study, Argentina, Brazil, Chile, and Ecuador, have significant social inequities, and segmented and fragmented health systems. There, the pandemic appeared to have spread rapidly in crowded and poor urban areas, where

informal employment and overcrowding are common. Positive cases and mortality rates increased significantly when infections reached the most vulnerable groups in Brazil, Chile, and Ecuador, where overcrowding and migration are essential to survival. In contrast, Argentina was able to mitigate, and Costa Rica was able to contain the pandemic. The Argentinian government emphasized that strict lockdown measures were successful while the Costa Rican government argued that testing, contact tracing, and isolation at the primary care level were crucial. Countries with the best outcomes showed prior greater political stability and had more inclusive governance structures. Countries with less favorable results, such as Brazil, Chile, and Ecuador, prioritized a hospital-centric strategy and had severe political and social crises that hampered governance of the pandemic response. In the latter countries, the loss of credibility in the authorities and inadequate communication, or containing errors, and lack of transparency, added to conflicts between stakeholders and government levels, impacting governance.

The pandemic developed in Latin America in the first half of 2020 within a framework of weak systemic governance, insufficient inter-institutional collaboration, and inadequate transparency of the state apparatus, making it difficult to formulate and apply political decisions that respond effectively to the common good [14] . The general characteristics of governance that have prevailed in Latin America during the COVID-19 pandemic have exposed and further exacerbated political crises within countries. At the same time, government institutions were ineffective in formulating and applying responses to the crisis, thereby deepening socioeconomic inequalities and pre-existing political struggles. For example, in Brazil, structural inequalities, political instability, harmful political decisions, poor federal and intersectoral coordination, and low levels

of participation from civil society, had a negative influence on management of the COVID-19 response, despite the country having a universal healthcare system in place.

How countries handle data and communications is a crucial part of their response to the pandemic. Public information that is precise as possible is as essential as lockdown measures and infection control. The health crisis brought upon by Covid-19 showed that it is more damaging not to share information than to make it public, especially because partial or changing data can accentuate previous perceptions of lack of transparency and create mistrust. Transparent data can aid in investigating, monitoring, tracing, and controlling outbreaks and incidence of transmission, particularly at the local and community levels, where different forms of support could be organized for prevention and isolation. Adequately channeling information is vital for the population to be willing and able to cooperate and support health measures. In countries like Brazil, Chile, and Ecuador, with complex social and political situations, deficiencies in information governance made it even more challenging to manage the crisis.

Limitations

Our study has several limitations. First, our analysis focused only on one Central American country and four South American, that while varied in size, region, and form of government, are not necessarily representative of Latin America overall. Second, our team of experts was formed via a convening and snowball sampling that may have introduced bias in the expert perspective included. We contrasted our perspectives with evidence from the literature and data from governmental and other publicly available sources. Third, our analysis was particularly focused on the early stages of the pandemic, and as such, may have missed critical governance developments later in the pandemic in the countries studied.

Conclusions

This study compared governance of the Covid-19 pandemic response in its early stages in Chile, Argentina, Ecuador, Brazil, and Costa Rica, within the broader context of the main restriction, health and social protection measures in each country. Using a narrative approach, we identified and analyzed the most salient characteristics of governance in its organizational, institutional, and informational dimensions. A focus on transparency and inclusion, together with attention to the primary level of care, appeared to be more prominent in countries with less Covid-19 incidence and mortality such as Argentina and Costa Rica. In contrast, Brazil, Chile, and Ecuador, with more fragmented and segmented health systems, coupled with less transparency and participatory decision making, where more severely impacted. Pandemic preparedness may benefit from emphasizing organizational, institutional, and informational elements of governance. Since data is essential to decision making in an evolving pandemic, the flow of information interacts with different elements of governance; therefore, more attention should be placed on the relation of the informational dimension with the organizational and institutional dimensions.

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Table 1. Demographic and socioeconomic indicators - Argentina, Brazil, Chile, Costa Rica, and Ecuador.

Country	Population 2020 (thousands)	Pop* 65 years and older (%)	Pop Urban (%)	Pop Afro descendant (%)	Pop Indigenous (%)	GDP per capita (US$)	Pop in Poverty (%)	Pop in Extreme Poverty (%)	Gini Coefficient (Income inequality)	Illiteracy (% Pop 15 years and older)	Pop with drinking water (%)	Pop with sanitation services (%)
	2020	2020	2020	2018	2018	2018	2018	2018	2018	2018	2017	2017
Argentina	45 196	11.4	92.5	0.4%	2.3%	10 105	24.4	3.6	0.396	1.1	NA	NA
Brazil	212 559	9.6	86.9	50.9%	0.4%	10 905	19.4	5.4	0.540	6.9	92.3	49.3
Chile	19 116	12.2	89.7	NA*	NA	15 443	10.7	1.4	0.454	3.6	98.6	77.5
Costa Rica	5 094	10.3	80.8	7.8%	2.4%	9 960	16.1	4.0	0.493	NA	93.8	NA
Ecuador	17 643	7.6	66.1	7.2%	7.0%	5 253	24.2	6.5	0.454	15.7	75.1	42.0

*** Abbreviations:** Pop = Population; NA = not available.
Sources: https://population.un.org/wpp/DataQuery; https://www.worldbank.org/en/topic/poverty/lac-equity-lab1/ethnicity/ip-population; https://washdata.org (Accessed 13 June 2020).

Table 2. Additional public health indicators - Argentina, Brazil, Chile, Costa Rica, and Ecuador.

Country	Life Expectancy at Birth	Infant Mortality Rate (per 1000 live births)	Maternal Mortality Rate (per 100,000 live births)	Total Mortality Rate (per 100.000 people)	Government Health Expenditures (%GDP)	Total Health Expenditures (% GDP)
	2015-2020	**2015-2020**	**2017**	**2015**	**2017**	**2017**
Argentina	76.4	10.2	39	566.3	6.6	9.1
Brazil	75.6	13.0	60	606.2	4.0	9.5
Chile	80.0	6.7	13	443.4	4.5	9.0
Costa Rica	80.0	7.3	27	394.4	5.4	7.3
Ecuador	76.7	13.6	59	439.2	4.4	8.3

Sources: https://population.un.org/wpp/DataQuery; http://apps.who.int/ghodata/?vid=110# (Accessed 13 June 2020).

Table 3. Governance characteristics in the COVID-19 response related to transparency and inclusion, by country.

	Argentina	**Brasil**	**Chile**	**Costa Rica**	**Ecuador**
Scientific and implementation-based evidence	Partial.	Partial; conflicts between authorities and experts.	Decision making not transparent; conflicts between authorities and experts.	Consultation with scientific teams; slow compilation of community-based experiences.	Political use of non-qualified information.
Different health and public health experts are consulted	Predominance of virologists.	Partially consulted but rarely considered.	Partially consulted but rarely considered	Predominance of epidemiologists and hospital experts	Sporadic consultations; no mechanism for consultation.
Inter-sectoral contribution to decision-making	Partial and scarce.	Economic and productive sectors; insufficient inter-sectoral coordination.	Partially and with limited leverage	Social contribution; tensions between economic and productive sectors.	Only with the productive sectors, not with other public sectors.
Commitment to civil society for future accountability	No consultations or involvement of civil society.	Mostly with the economic sector.	Partially consulted but with limited consideration.	Voluntary and spontaneous participation.	Not consulted or considered.
Women and social or ethnic minorities included in task forces	Minority representation of women. No ethnic or minority representation.	Predominance of white men including military.	Representation of women, but no gender perspective. No ethnic or minority participation.	Women as decision makers; attention to ethnic groups was prioritized.	No ethnic or minority participation
Transparency on who is making decisions and how	Partial. Political conflict between jurisdictions.	Partial; decisions were more concentrated on governments; occasionally clear but controversial.	Limited transparency; questioning due to concealment of data.	Information available on the internet, from Ministry of Health and President´s office.	No clear information on how decisions were made at the central level.

Consistent and transparent information sharing on a continuous basis	Information reported twice a day from pandemic onset; no public opinion concerns with data.	Daily reports at pandemic onset. Variable after April. Insufficient data on tests and vulnerable groups.	Daily reports were partial, changing, and controversial.	Daily report. Limited information on success or effectiveness indicators.	Partial, incomplete, and inconsistent information.
Leadership and credibility of government(s), trust in health authorities	The Ministry of Health is scaffolded by a legal framework and elements of governability.	Leadership crisis in the central government; conflicts between political actors.	Leadership crisis, lack of credibility and trust.	High degree of leadership and credibility of the health authorities.	The health authority does not keep a clear line of action.
Delegation of power and implementation structures	National executive power centralizes decisions, but each province has executive power to implement.	Limited coordination and decisions at the federal level; decisions made by local governments.	Centralized decisions; permanent conflicts with municipal and local authorities.	Decisions in local emergency committees with continued technical support by health experts.	Decisions delegated to municipalities without developing sufficient local technical capacities.