EFFECTS OF COVID-19 ON HEALTH SERVICES IN LATIN AMERICA



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ABSTRACT

The objective of this essay was to conduct a documentary research on the effects of COVID-19 on health services in some Latin American countries. This is a descriptive theoretical documentary research, based on the exhaustive search of original scientific articles, with topics referring to COVID-19 and health services in Latin American countries, including Panama, published between March 2020 and May 2021, in Spanish and English, indexed in different databases such as Pub Med, Google Academic, bvs, Scielo; descriptors of health science (DeCS) and "effect" "COVID-19", "health services", "primary care" from the Medical Subject Headings (MeSH) were used as: "effect", "COVID-19", "health System" "primary care". The Boolean operators used were AND and OR. In addition, the Zotero manager was used. The response of the health systems of the 18 Latin American countries studied in relation to the effects of the COVID 19 pandemic are public health

measures, early detection of suspected cases, in relation to primary care in 2020, a reduction was observed in the coverage of obstetric care services in the Latin American countries where 8 (44%) cancelled care and 7 (39%) retained it, in prenatal care 10 (56%) complied with care and 6 (33%) cancelled care; However, in preventive care for children, 12 (67%) complied with the care. It is essential to strengthen the strategy of primary health care, with a family and community approach, organized to achieve universal access to health, in addition to stimulating preventive and educational programs.

Keywords: COVID-19, health services, primary care and Latin American countries.

INTRODUCTION

It is important to underline that health services responded to the COVID-19 disease. The affected countries had to take different measures to fight against this new disease, health systems were forced to redirect their functions and attention to the battle against COVID-19, from its prevention to the treatment of infected persons.

Notably, the COVID-19 pandemic has placed great demands on public health systems around the world, and has highlighted the shortcomings of health care for underserved and vulnerable populations.(George, 2020). At the same time they have been forced to respond quickly and make urgent decisions to save lives.

Prioritizing care for patients infected with the new coronavirus (SARSCoV-2) has led to a reduction in the provision of health services to patients with other diseases, mainly due to the allocation of resources (human, financial, logistical and physical structure) for this problem. (Cortiula et al., 2020).

In Latin America, characterized by fragmentation and segmentation of health care systems, the effects of COVID-19 were even more negative because of the multiple ongoing social and economic problems that add to this situation. (Rodriguez-Morales et al., 2020).

Well, in August 2020, more than 5 million people in Latin America and the Caribbean were diagnosed with COVID-19 (CSSE, 2020) and about 200,000 died. Governments allocated resources to strengthen the capacity of the health sector to cope with the pandemic (ECLAC, 2021) but the response was insufficient due to pre-existing weaknesses in health systems.

In other words, these countries presented structural conditions of inequality, inequity, vulnerability and social exclusion that combine and reproduce the informality and precariousness of employment, the weakness of social protection systems and productive structures with low levels of integration and limited capacities to maintain sustainable levels of growth. (ECLAC, 2021).

Likewise, in response to the population in the health sector, the saturation of the health system in Latin American countries, interruption of essential services such as primary health care, shortage of infrastructure and human resources in health were evidenced.

On the other hand, the underfunding of primary health care (PHC) and epidemiological surveillance and the lack of articulation between the different levels of care weaken coordinated national response actions (ECLAC, 2020).

It is worth highlighting the strengthening of the first level of care, since it is a fundamental pillar in primary health care; its actions are directly related to pandemic control, as well as traceability activities, isolation, and the implementation of national vaccination plans against COVID-19.

Among the Latin countries most affected in the provision of essential health services is Paraguay; health care in essential services has been affected by the pandemic due to the reduction in the number of consultations for causes unrelated to COVID-19, being considered of alert to the health system by the decrease in indicators related to prevention. (Tullo et al., 2020).

At the same time, Panama, the second country in Central America with the most unequal distribution of wealth, has been affected by the COVID-19 pandemic and has one of the highest rates of diagnostic tests per inhabitant in the region and, consequently, the highest incidence rate of COVID-19, but there is a critical node in the number of consultations in the care of chronic and maternal and child diseases. (Loaiza et al., 2020).

However, it is worth mentioning that "before COVID-19, basic services in Panama were not universal for the 4,158,783 million people, with an estimated 23% of the population living in general poverty and 10.3% in extreme poverty, with the highest poverty rates in the indigenous regions, whose population has a life expectancy at birth of 68 years" (Barrantes, 2020, p. 18).

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With reference to the above, (Beluche, 2021) states that the COVID-19 pandemic has demonstrated two things in Panama: first, the weakening of the primary care system and, second, the lack of health staff with respect to the population. Emphasis is placed on the destruction of primary care and the strengthening of tertiary care, i.e., hospitalization and specialized clinics.

It should be noted that having a curative rather than a preventive system means that public investment in health, even though it has increased steadily, is not efficient, effective and efficient in correcting territorial inequalities, as it lacks a true strategic health plan, preventing equal health for all (Sánchez et al., 2021).

Within this framework, the inequality gap and the worsening of its socioeconomic effects, health inequities reflect the lack of human rights of the population (Barrantes, 2020).

It turns out that it is clear and indispensable to strengthen the strategy of primary health care, with family and community approach, organized to achieve universal access to health, so that it can respond to the largest number of health situations, including emergencies, investing 30% of public spending on health (PAHO, 2019). In addition to contributing to improving the coverage of services, solid and quality, it protects the population from catastrophic health expenditures (WHO, 2020).

Finally, according to Guillem, (2020) it is necessary to restructure primary care and take advantage of the crisis as an opportunity to improve and enhance telephone and electronic care, of course, but guaranteeing face-to-face care as the central axis of care and minimizing the risk of errors and maintaining the anamnesis, physical examination and communication with the patient as the basis of care.

In this sense, the importance of guaranteeing the provision of essential health services in the context of a prolonged pandemic is reaffirmed, and mass vaccination is understood as one of the main challenges for countries to control the pandemic, together with the application of social protection and public health measures.

Due to the importance of health care, the objective of this study was to conduct a documentary review regarding the effects of COVID-19 on health services in Latin American countries, including Panama. For this reason, the following question was asked: What has been written in the scientific literature regarding the effect of COVID-19 on health services

in Latin American countries and Panama, in the months of March 2020 to May 2021?

MATERIALS AND METHODS

It is performed, a descriptive theoretical documentary research during the months of March 2020 to May 2021, based on original articles indexed in different databases, taking into account the search criteria in different databases such as Pub Med, Google Academic, BVS, Scielo; health science descriptors (DeCS) were used and: "effect" "COVID-19", "health services", "health system" "primary care" from the Medical Subject Headings (MeSH) as: "effect", "COVID-19", "health System". "primary care", and The Boolean operators used were (AND) to establish logical operations between concepts and (OR) to retrieve documents where one, another or at least one of the arguments appears. In addition, the Zotero manager was used.

On the other hand, in the ethical aspects, we agreed to comply with the ethical and moral principles that should govern the documentary research study, and for this reason we requested an exemption from the ethics committee because it was considered a study without human participants.

Table 1. Inclusion criteria

Type of studies	Observational
Type of indicators or topics	Health effect, COVID-19, primary care and health services.
Geographical criteria	Latin American countries and Panama.
Time criteria	March 2020 to May 2021
Linguistic criteria	English and Spanish language
Document criteria	Original articles indexed in electronic databases.

Among the exclusion criteria were the following: systematic review articles and also those articles that when reviewed, according to requirements in the title and abstract, did not have the variables and information recorded according to the objectives outlined; in addition, the results obtained a weak score in the assessment of methodological quality.

Results

As a result of the search for original articles in the databases, a total of 44 articles were reviewed, distributed as follows: Pubmed four (4) articles, Scielo eighteen (18) articles,

Google academic sixteen (16) articles, BVS six (6).

Subsequently, we proceeded to eliminate articles considering duplicates and articles filtered on the basis of title and abstract, exclusion criteria and using methodological quality, leaving a final number of thirty-four (34) articles (33 qualitative and 1 quantitative) for the presentation of results.

In order to determine the quality of each of these studies, the CASP tool was used, specifically three general aspects were considered: methodological rigor, credibility and relevance.

Búsqueda electrónica en base de datos: SCIELO: (n=18) GOOGLE ACADEMICO (n= 16) BVS(n=6) PUBMED (n=4) Resultados de la búsqueda Duplicados removidos (n= 0) (n = 44)Artículos filtrados en base a título y Registros excluidos después de la resumen 44 filtración (n= 5) Artículos a texto completo evaluados para su elegibilidad (n=39) Aplicación de valoración de calidad y criterios de inclusión Excluidos: (n=5) Artículos incluidos en la revisión sistemática: (n=34)

Figure 1. Review flow diagram.

Source: Own elaboration (2021)

CHARACTERISTICS OF THE INCLUDED STUDIES

The articles selected and included in this research were carried out after a review of documents according to the topic, so of the 34 articles, 77% provide information on Covid-19,

health system and primary care in Latin American countries; 23% COVID-19 and health system or health benefits, expressly refer to Panama.

Analysis of information and discussion

The health situation in Latin America is very heterogeneous, reflecting its political and economic circumstances. That is why the protection capacity of the region's health systems on a global scale, according to the Global Health Security Index, is considered medium level with the exception of Venezuela, Honduras, El Salvador and Guatemala, which are classified as low (Peñafiel-Chang et al., 2020).

Table 2. Effect of Covid-19, primary care and health system in Latin American countries, 26

Countries (year)	Definition of a new PHC care model	COVID-19 and primary care	COVID -19 effect and health systems to preventive comprehensive health monitoring
Bolivia (2008)	Intercultural Family, Community Health Model (SAFCI)	Social isolation and staff protection measures do not completely stop contagion, but they prevent it from occurring rapidly. Quarantine measures	Monetary poverty, inequality in the quality of health care, housing conditions, food insecurity, poor access to education, and quality of work. A transversal dimension related to family life, care and gender relations is added (Wanderley et al., n. d.).
Brazil (2006/ 2011/ 2017)	Family Health Strategy (FHS)	They assume the role of health surveillance to reduce the risk of spreading the epidemic and control the contagion in the territories with initiatives of remote monitoring of cases and contacts. Hygiene and safety care (Claramunt M and Maria Cecilia, 2003).	Most of the activities of PHC services were suspended, health controls, this influences the health conditions of the population, considering aspects such as their severity, duration, potential to generate chronic complications to age groups and to the evolution of the disease.

Countries (year)	Definition of a new PHC care model	COVID-19 and primary care	COVID -19 effect and health systems to preventive comprehensive health monitoring	
Chile (2005/2013)	Integrated Family and Community Health Care Model	At the beginning of the pandemic, the official response did not include PHC in the epidemiological management, however, in some municipalities the teams carried out follow-up, education and specific prevention with their own guidelines and resources.	One of the most sensitive aspects of a health outbreak that demands the health system is the displacement of care for other pathologies, whose non-resolution may result in an increase in related morbidity and mortality. Decrease in the demand for consultations, impact on cancer mortality due to the reduction of chemotherapy treatments or other relevant services. Decrease in the production of elective surgeries, vaccination coverage and health controls (González, 2020).	
Colombia (2011/2019)	Territorial Health Care Model (Resolution 2626 of 2019).	Decided to carry out first of all education and social distancing measures, quarantine of the population in a timely manner. Sampling and sanitary disinfection actions (spraying of chemicals).	Four important effects were found: an increase in maternal and infant mortality; fewer treatments for diseases not related to COVID-19; psychosocial effects on children and adolescents; and effects on sexual and reproductive health. (Tabon, 2021).	
Cuba	Family physician and nurse practitioner program, with a territorial, community and intersectorial approach.	This pandemic health care systems increased health care staffing, primary health care systems, as the best defense against new outbreaks of COVID-19. For the detection of symptomatic cases, contacts and suspects of the disease (Alvarez, 2020).	s increased health staffing, primary h care systems, he best defense new outbreaks of COVID-19. The mental health impact of an epidemic is generally momarked in populations that living precarious conditions, have scarce resources and limited access to health and socious services.	

Countries (year)	Definition of a new PHC care model	COVID-19 and primary care	COVID -19 effect and health systems to preventive comprehensive health monitoring
Uruguay (2007)	There is no new model, but the SNIS assumes PHC as a strategy and prioritizes the first level of care.	Functions in case detection, follow-up and contact control, and community information and control of contacts and information to the community, which has allowed 87% of laboratory-confirmed cases to be resolved at the community level.	The impact of the pandemic represents an unprecedented challenge. The impact of the reduction in health services coverage on the maintenance of the targets of goal 3 of the 2030 Agenda for Sustainable Development - to reduce maternal, neonatal and underfive mortality and to ensure universal access to sexual and reproductive health services. The pandemic has made it difficult to achieve or maintain these goals, even though the region was well on its way to achieving them. (Sollazzo and Berterretche, 2011).
Paraguay	Primary Health Care (PHC) as a strategy to achieve universal health systems, considering the segmentation of the system and fragmentation in provision.	For the detection of symptomatic cases, contacts and suspects of the disease. Distancing, quarantine	Health care in essential services has been affected by the pandemic due to the reduction in the number of consultations due to causes other than COVID-19, which should serve as a warning to the health system so as not to lose the ground gained on this front. This is due to a reduction in the provision of health services to patients with other diseases, due to the allocation of resources to the problem.
Argentina	Since the Declaration of Alma Ata, PHC, which has translated into the goal of "Health for all by the year 2000", is still as far away as it was then.	Application of preventive and obligatory social isolation to prevent the spread of covid-19. In this way, a set of changes in individual and collective practices related to hygiene, physical distancing and the use of masks were promoted as measures to reduce contagion. Early detection of suspected cases of COVID-19 (Ratti et al., 2020)	Services considered non- urgent were interrupted, scheduled surgeries were suspended, routine diagnostic tests were deferred, and outpatient consultations by primary care physicians and all specialties were transformed into tele-consultations due to the contingency. Emergency services were affected by the modifications implemented for the care of patients suspected or confirmed with COVID-19.

Countries (year)	Definition of a new PHC care model	COVID-19 and primary care	COVID -19 effect and health systems to preventive comprehensive health monitoring	
Ecuador	The Model of Integrated Family, Community and Intercultural Health Care.	Establishment of quarantine to try to stop its advance, especially in the largest cities (Acosta, 2020).	Morbimortality due to severe ARI in Ecuador was associated with social and demographic factors. And to risk and vulnerability determinants by COVID. due to lack of attention in consultations.	
Venezuela	National Training Program in Integral Community Medicine	A massive population survey was carried out to identify respiratory symptomatic people, who were visited at their homes to carry out tests to identify the disease and, if positive, to isolate them (Gonzalez, 2020).	A migratory scenario that had already been showing signs of involuntariness and a growing intra-regional mobility of people, characterized by the increase in Venezuelan migration.	
Perú	Health system based on primary health care, comprehensiveness, coordination, equity, efficiency and quality.	Establishing quarantine, border closures, the interruption of interprovincial travel, and restrictions on urban and rural transportation, security measures, distancing, etc.	Unemployment has increased, high levels of poverty, malnutrition and lack of access to clean water increase the vulnerability of the population as well as the incidence of other diseases such as tuberculosis, dengue fever, malaria and anemia, lack of primary health care (Abizaid et al., 2020).	
Costa Rica	Primary care is provided by the Basic Integral Care Teams.	A quarantine regime (15 to 30 days) is implemented for infected persons and those who have had contact with them. Hand washing and constant use of alcohol are promoted. The Basic Comprehensive Health Care Team (EBAIS), health centers distributed throughout the town (Morera Salas and Aparicio Llanos, 2010).	Reduction in the coverage of health services, decrease in health controls of the population, as well as vaccination coverage.	

Countries (year)	Definition of a new PHC care model	COVID-19 and primary care	COVID -19 effect and health systems to preventive comprehensive health monitoring	
Guatemala	Comprehensive and integrated care in a community model	Closing of schools, quarantine, distancing, hygiene education and hand washing, detection of symptomatic cases, contacts and suspects of the disease (Saez, 2020).	A strong economic recession that increased poverty, health emergency with very negative effects on employment.	
Mexico Primary Health Care in 1978	Primary health care is the core of the country's of the country's health system and is an integral part of the overall socioeconomic development of the community.	Public health measures are decisive for the control of this pandemic. These include social containment measures, ranging from social distancing to quarantine, which have proven to be useful (Díaz et al., n.d.). (Diaz et al., n. d.).	Risk of expansion of new and old diseases as a result of the microorganism-human environment combination.	

Source: Own elaboration, 2021.

Effect of COVID -19, primary care and health system in Panama, 8 articles (24%)

First of all, Panama has a Constitution that establishes in its Article 105, that any person, regardless of their legal status, can have access to public and private medical services in Panama. Currently, Panama is experiencing the health crisis of the pandemic, also presents the second most unequally distributed wealth in Central America, with the pandemic COVID-19 testing rates have not been low (Loaiza, 2020).

Like Latin American countries, the political strategies concerning primary care was to make changes in the way of attending the population as described by Batalla Martinez (2020) in the study primary care during the pandemic health system.

As primary care centers closed their doors, professionals were recruited to attend hospitals and traceability activities. However, there were centers that remained open to issue controlled prescriptions for chronic diseases, limiting access to patients. Practically all previously scheduled activities (home visits and follow-up of chronic patients) were paralyzed, maintaining only urgent care, both medical and nursing (Botello, 2020).

More than a year after the beginning of the pandemic, the time to recover a new

normality begins to deepen preventive care activities, promoting self-care. Among the preventive activities is the application of new vaccines in all circuits of the country.

There have been 390,221 confirmed infections and 6,457 deaths from COVID-19, despite 1,343,784 doses of vaccine (of the more than 1.76 million received so far), the vast majority from Pfizer, the main supplier in this country of 4.28 million people, and the remainder from AstraZeneca (PAHO, 2021).

However, strong primary health care can substantially reduce pressure on health systems through prevention, detection and monitoring of early signs of an outbreak, treatment of less complex cases, and continuity of care for other health needs.

Primary care needs to be restructured, and coverage in the different programs needs to be increased, a situation that has not yet been achieved to improve the health system.

Table 3. The COVID-19 pandemic in health systems and the percentage reduction in coverage of primary health care services in Latin American countries and Panama, between March and May 2020.

Countries	Obstetric care	Prenatal, obstetrical, postnatal and postnatal care	Preventive consultations for children or adults (developmental monitoring, routine visits, vaccinations)
Bolivia	< 10%	10-25%	25-50%
Brazil	0% indicates no impact	0%	May: Partial suspension of vaccination services.
Chile	-	-	April: Vaccination programs continue
Colombia Maintain the services of care		May: Care services are maintained	May: Vaccination services are being maintained
Cuba	They maintain care services.		Vaccination services are maintained.
Uruguay	Maintenance of obstetrics services	Prenatal care services are maintained	Vaccination services are maintained
Paraguay	Cancellation of emergency obstetric care	Cancellation of postnatal care, newborn essential, immunization	10-25% Preventive consultations for children, vaccination
Argentina	0-25%Obstetric care	0-25%Prenatal care	Partial suspension of vaccination services.

Countries	Obstetric care	Prenatal, obstetrical, postnatal and postnatal care	Preventive consultations for children or adults (developmental monitoring, routine visits, vaccinations)
Ecuador	<10% Emergency obstetric and other emergency care	25-50% Prenatal care	Partial suspension of vaccination services
Venezuela	Restriction of obstetric care	Restriction of prenatal care	Vaccination services are maintained
Peru	Cancellation of outpatient care (obstetrics, contraception)	Cancellation of outpatient care (immunization, prenatal)	Partial suspension of vaccination services
Costa Rica		A regulation was created whereby low-risk pregnant women are telephoned and verified to have completed the tests.	April: Vaccination programs are being maintained.
Guatemala	Cancellation of services	10-25%	Se mantienen los servicios de vacunación.
	10-25%	Vaccination services are maintained.	Disminución en los controles en niños
El Salvador	Pregnant women have been lost to follow-up	Lack of continuity of care for pregnant women with HIV, syphilis, or other sexually transmitted infections.	Decrease in controls in children
Mexico	10-25%	25-50%	Vaccination services are maintained
Honduras	Decline in all health services	Decline in all health services	Partial suspension of vaccination services
Nicaragua			Vaccination services are maintained
Panama	Cancellation of services	Cancellation of prenatal care	Vaccination services are maintained

Source: Prepared by the authors based on Castro, A. (2020). Challenges of the COVID-19 pandemic in the health of women, children and adolescents in Latin America and the Caribbean. UNDP, 19, 30.

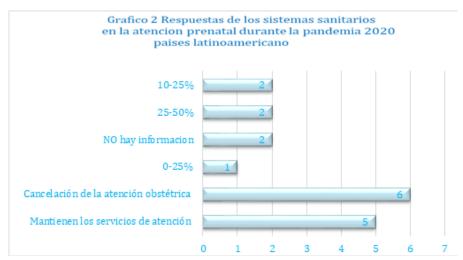
Graph 1. The following is an illustration of the behavior of the health system in Latin American countries in relation to obstetric care during the pandemic.



Source: Prepared by the authors based on Castro, A. (2020). Challenges of the COVID-19 pandemic in the health of women, children and adolescents in Latin America and the Caribbean. UNDP, 19, 30.

Figure 1 shows that 8 (44%) of the Latin American countries (Paraguay, Venezuela, Peru, Guatemala, Panama, Salvador, Brazil and Honduras) canceled obstetric care; however, 7 (39%) Latin American countries (Bolivia, Colombia, Cuba, Uruguay, Argentina, Ecuador and Mexico) maintain irregular care in order to provide obstetric care services and 3 countries (17%) (Nicaragua, Chile and Costa Rica) did not provide information.

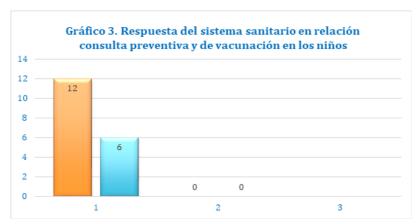
Graph 2. Responses of health systems to prenatal care during the pandemic 2020 Latin American countries



Source: Prepared by the authors based on Castro, A. (2020). Challenges of the COVID-19 pandemic in the health of women, children and adolescents in Latin America and the Caribbean. UNDP, 19, 30.

Graph 2 shows the response of health systems to prenatal care in the 2020 pandemic. Of the 18 countries studied, 10 (56%) complied with maintaining prenatal care partially (Bolivia, Colombia, Cuba, Uruguay, Argentina, Ecuador, Costa Rica, Guatemala, Mexico, and Honduras), while 6 countries (33%) (Panama, Salvador, Peru, Venezuela, Paraguay, and Brazil) cancelled care, and in 2 countries (11%) (Chile and Nicaragua) it was not possible to obtain the information.

Graph 3. Response of the health system in relation to preventive consultation and vaccination in children.



Source: Prepared by the authors based on Castro, A. (2020). Challenges of the COVID-19 pandemic in the health of women, children and adolescents in Latin America and the Caribbean. UNDP, 19, 30.

Figure 3 shows the response of the health systems in preventive care and vaccination of children in the 2020 pandemic. Of the 18 countries studied, 12 (67%) partially complied in maintaining preventive care for children (Bolivia, Chile, Colombia, Cuba, Uruguay, Paraguay, Venezuela, Costa Rica, Guatemala, Mexico, Nicaragua, and Panama), while 6 countries (33%) (Honduras, El Salvador, Peru, Ecuador, Argentina, and Brazil), decreased their attention.

CONCLUSIONS

The impact of the COVID19 pandemic is reflected in the coverage of primary health care services, but it is necessary to mention the health systems and the use of strategies of resolution capacities to respond to the pandemic and not to totally suspend health services and their preventive care programs; however, there are health systems where the resolution capacity was to close the programs, based only on curative care.

Public health measures in the 18 countries in relation to the COVID 19 pandemic were social containment, ranging from social distancing to quarantine, food delivery, use of masks as measures to reduce contagion and early detection of suspected cases of COVID-19, among others.

It is essential to strengthen the strategy of primary health care, with a family and organized community approach, to achieve universal access to health, in addition to stimulating preventive and educational programs.

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