

Successful strategies and challenges in the control of COVID-19 infection in the context of Primary Health Care in Brazil.

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Summary

Introduction: The COVID-19 pandemic has had a catastrophic effect on world demography. Brazil, despite having a universal health system and an extensive network of availability of Primary Health Care, still suffers from the consequences of this disease. **Objective:** To describe the scientific evidence on the strategies used nationally by Primary Health Care to control the infection by COVID-19. **Methods:** Integrative review carried out in July in five databases: ILACS, BDENF, MEDLINE, CINAHL and Web of Science. **Results:** Among the control strategies, the articles presented three axes: continuity of PHC actions, health surveillance in the territories and attention to users with COVID-19. As for successful strategies, they include remote monitoring of both suspected cases and patients with a confirmed diagnosis; and the use of geoprocessing for planning immunization actions. The challenges are broad and complex, as they range from PHC management to the practice of health professionals, especially Community Health Agents. **Conclusion:** Identify the control strategies used nationally, share the actions that were successful and, mainly, the challenges,

Descriptors: Primary Health Care; Pandemics; COVID-19.

INTRODUCTION

Declared on March 11, 2020, the COVID-19 pandemic, caused by Severe Acute Respiratory Syndrome, Coronavirus 2 (SARS-CoV-2), has had a catastrophic effect on world demographics, with more than 4 million deaths in the world. planet, with 509 thousand deaths in Brazil alone. It is considered the most consequential global health crisis since the 1918 influenza pandemic era (WHO, 2020; CASCELLA et al., 2021).

While there is substantial progress in understanding the virus and managing COVID-19, controlling the continued spread of SARS-CoV-2 has become an issue of growing concern as it continues to spread and lead to waves of outbreaks of this viral disease. mainly attributed to the emergence of mutant variants of the virus (CASCELLA et al., 2021). In addition to the challenge of the disease itself, each country has peculiarities that directly influence the response to COVID-19 control measures (ORELLANA et al., 2020).

Brazil, despite having a universal health system and an extensive network of Primary Health Care (PHC) availability, still suffers from the consequences of this disease (FARIA et al., 2020). The Unified Health System (SUS) is a structured health policy based on PHC and operational at the municipal level by the Family Health Strategy (ESF). The ESF is composed of a team formed by a doctor, nurse, dental surgeon, nursing technician/assistant, oral health technician or assistant and Community Health Agents (ACS) (GUIMARÃES, 2020).

In the context of the pandemic, COVID-19 infection control strategies in PHC can be organized into four axes: health surveillance in the territories, attention to users with COVID-19, social support to vulnerable groups, and continuity of the actions of the PHC. APS (MEDINA et al., 2020). Public health emergencies require, in addition to new forms of social behavior, the development and adaptation of work strategies and methodologies.

The Ministry of Health (MS) has the “Protocol for Clinical Management of Covid-19 in PHC”, currently, in version number nine. The protocol clearly shows the magnitude of PHC as a gateway to the Unified Health System (SUS), with the level of care in charge of organizing the SUS Care Network so that there is no overload at any level of care and they can meet their demands, especially the demands of serious cases (BRASIL, 2020a).

During outbreaks and epidemics, PHC is essential in the global response to the disease in question, as they offer resolute assistance to mild cases of COVID-19, maintaining the

longitudinally and coordination of care at the level of health care with competence to identify , in advance, the serious cases that should be referred to specialized services (BRASIL, 2020b).

It is observed that the actions to combat the COVID-19 pandemic by PHC are presented in protocols of the Ministry of Health and are constantly updated, however, the implementation of strategies in each region of Brazil is dynamic, that is, they adapt to the needs. National scientific production on this topic is expanding, as the pandemic is still ongoing (MORAES, 2020; MEDINA et al., 2020), but there is a need to identify the control strategies used nationally, share the actions that have been obtained. success and, mainly, the challenges in order to strengthen the actions to face the pandemic.

OBJECTIVE

To describe the scientific evidence on the strategies used nationally by Primary Health Care to control the infection by COVID-19.

METHOD

It is an integrative literature review that is defined as a method of obtaining, identifying, analyzing and synthesizing the literature on a specific topic and allows general conclusions regarding delimited areas of study. To improve the rigor of this integrative literature review, the stages proposed by Mendes, Silveira and Galvão (2008) were used: I – identification of the theme and elaboration of the research question; II – establishment of criteria for inclusion and exclusion of studies; III – definition of the information to be extracted from the selected studies; IV – evaluation of studies included in the integrative review V – interpretation of results; VI – synthesis of knowledge. The process of gathering scientific evidence will proceed from the identification of the theme and guiding question.

To structure the research question, the PICo strategy was adopted, where P is the population to be studied, I is the research interest and Co is the context in which the research is inserted (SANTOS; PIMENTA; NOBRE, 2007) :

- Problem (P): SARS-CoV-2 infection;
- Interest (I): Infection control strategies;
- Context (Co): Primary Health Care.

Thus, the following research question was defined: What is the scientific evidence on the strategies used nationally by Primary Health Care to control the infection by COVID-19?

Data collection was carried out in a systematic way in the databases Latin American and Caribbean Literature on Health Sciences (LILACS), Virtual Nursing Library (BDENF), National Library of Medicine (MEDLINE), CINAHL and Web of Science, via the portal of the Higher Education Personnel Improvement Coordination (CAPES). The search strategy was built to meet the requirements of each database, that is, the Health Sciences Descriptors (DeCS) were used for the LILACS database, the Mesh descriptors for the MEDLINE search and the CINAHL titles for the search performed for the CINAHL database. To search the Web of Science database, we used uncontrolled descriptors. The search strategy was built and can be reproduced according to the table below.

Painting1. Search strategy used in databases

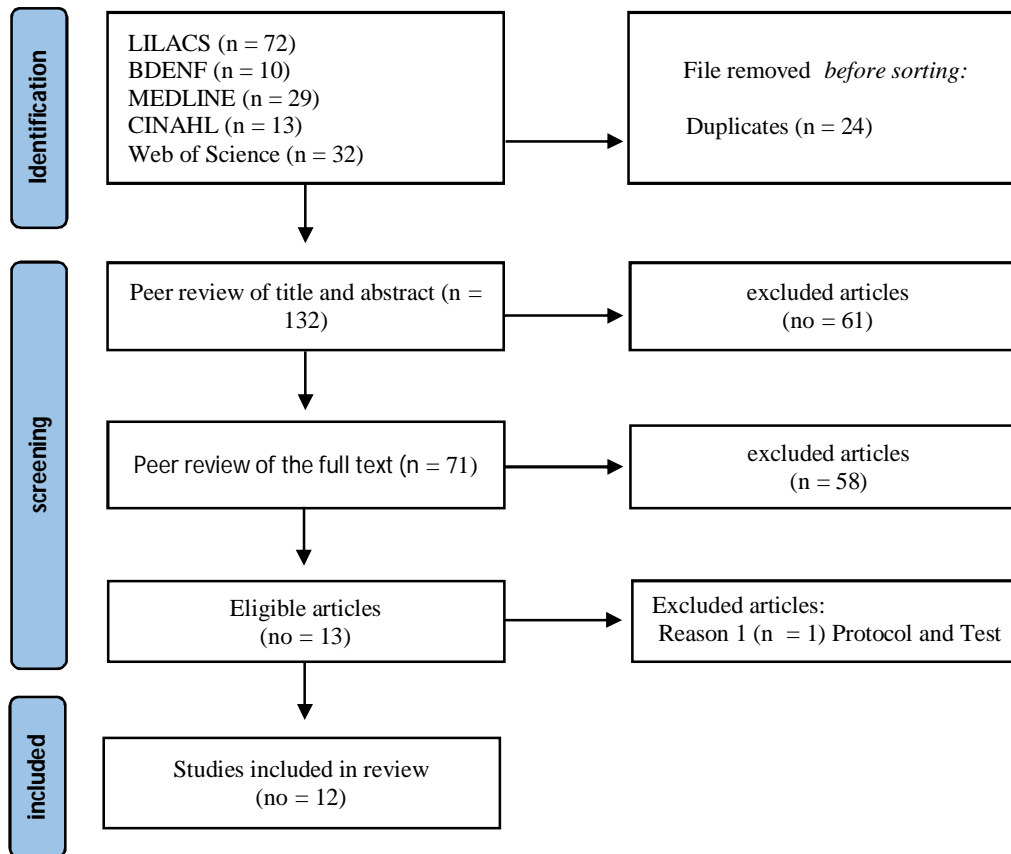
LILACS and BDENF	((Primary Health Care) OR (Family Health Strategy)) AND ((COVID-19) OR (Pandemics)) AND (Brazil)
MEDLINE/PubMed	("Primary Health Care"[Mesh] AND "COVID-19"[Mesh] OR "Pandemics"[Mesh] AND "Brazil"[Mesh])
CINAHAL	("Primary Health Care" AND "COVID-19" OR pandemic AND Brazil)
Web of Science	((Primary Health Care AND Pandemics OR COVID-19 AND Brazil)

Source:Prepared by the authors.

Study selection was guided by inclusion and exclusion criteria. Studies with a specific object on strategies used nationally by Primary Health Care to control COVID-19 were included, without a time frame and without a language filter. As exclusion criteria: reviews, opinion essays, editorials, abstracts, guidelines, protocols, comments and book chapters. The study selection dynamics took place in July 2021, being carried out independently by two reviewers, to ensure rigor in the article selection process, and cases of doubt were judged by a third reviewer.

The PRISMA Group 2021 model (PAGE et al., 2021) was used to present the stages of selection of articles, shown in Figure 1. For the analysis, synthesis and organization of the selected articles, a form built by the authors was used. the following information: author(s)/year, title, location, covid-19 infection control strategy, successful strategies and challenges.

Figure 1 – Flowchart of the selection of studies retrieved from the databases, adapted from the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA)



Source: (PAGE et al., 2021).

RESULTS

The scientific evidence retrieved through the search strategy totaled 156 documents, LILACS with 72, Web of Science with 32, MEDLINE with 29, CINAHL with 13 and BDENF with 10. When applying the inclusion and exclusion criteria, without temporal or language filter, 12 articles remained. Most of the articles were published in 2021, with 75% and the rest in 2020. Regarding the place of publication, 59% of the articles were carried out with national data, 25% of the articles were carried out in the northeast region and 8% in the south and southeast region, respectively.

Table 1 - Synthesis of studies included in the integrative literature review

Author(s)/year	Place	COVID-19 control strategy	successful strategies	Challenges
Jesus et al. (2020)	Salvador BA)	Health surveillance in the territories	Evaluative-normative model for monitoring suspected and confirmed cases for the Sars-CoV-2 virus	Integration of RAS actions and services
Lucena et al. (2020)	National	Continuity of APS's own shares	-	Difficulty performing oral health procedures
Prado et al. (2020)	National	Health surveillance in the territories; Attention to users with COVID-19; Continuity of APS's own shares	Monitoring of patients with remote surveillance; ACS performance	Organizational heterogeneity of local systems; Difficulties in articulating surveillance and actions in PHC; Absence of federative coordination
Assis et al. (2021)	Northeast Region	Health surveillance in the territories	-	Adherence to social isolation, lack of adequate government support and guidance
Chisini et al. (2021)	National	Continuity of APS's own shares	-	Difficulty performing prenatal procedures, diabetes and medical consultations in PHC
Costa et al. (2021)	National	Health surveillance in the territories; Attention to users with COVID-19; Continuity of APS's own shares	-	The insecurity of the ACS; lack of PPE
Leal et al. (2021)	Sao Caetano (SP)	Health surveillance in the territories; Attention to users with COVID-19;	Corona Sao Caetano Platform	-
Liebel et al. (2021)	Santa Catarina	Health surveillance in the territories	Health information systems and information technologies	-
Lotta, Rabbit and Brage (2021)	National	Continuity of APS's own shares	-	Difficulty in changing activities developed by nurses and ACS; Lack of PPE, training, testing for COVID-19

Rocha et al. (2021)	National	Immunization	Use of geoprocessing and spatial artificial intelligence to plan actions in the immunization plan against Covid-19	Poor use of geographic resources to support the location of vulnerable and priority groups for immunization
Santos et al. (2021)	National	Continuity of APS's own shares	-	Difficulty performing oral health procedures
Vieira-Meyer et al. (2021)	Fortaleza (CE)	Attention to users with COVID-19; Continuity of APS's own shares	-	Violence in the territory of action of the ACS

Subtitle:Health Care Networks (RAS), Primary Health Care (PHC), Community Health Agent (ACS), Personal Protective Equipment (PPE).

DISCUSSION

Among the COVID-19 infection control strategies in PHC, the articles presented three axes: continuity of PHC own actions, health surveillance in the territories and attention to users with COVID-19. As for successful strategies, they include remote monitoring of both suspected cases and patients with a confirmed diagnosis; and the use of geoprocessing for planning immunization actions. The challenges are broad and complex, as they range from PHC management to the practice of health professionals, especially Community Health Agents.

Regarding the continuity of PHC own actions, only one article described successful experiences in COVID-19 infection control, such as the incorporation of communication technologies that helped to save time for the reorganization of PHC and the Expanded Family and Health Center. Primary Care (NASF); the contribution of ACS in health education articulated to the population through community surveillance (PRADO et al., 2020). The challenges were described in all articles, as changes in the country's epidemiological scenario during the pandemic affected not only management, but health professionals and service users (CHISINI et al., 2021; COSTA et al., 2021; LOTTA; COELHO; BRAGE, 2021; ROCHA et al., 2021; VIEIRA-MEYER et al., 2021).

The difficulties in performing basic procedures such as medical appointments, prenatal care and dental procedures can be justified by the recommendations, across the country, of suspending elective care and prioritizing those considered urgent and emergency (LUCENA et al., 2020; CHISINI et al., 2020; CHISINI et al. al., 2021; SANTOS et al., 2021); for the relocation of professionals to fight the pandemic; by the number of professionals on leave for being in the risk group; and by the decreased demand for health services by users, fearing infection by SARS-CoV-2 (CHISINI et al., 2021).

Another impact on the continuity of PHC actions were changes in the activities carried out by health professionals, especially the ACS (COSTA et al., 2021; LOTTA; COELHO; BRAGE, 2021). With the COVID-19 pandemic, the changes were regarding home visits, guidelines on home isolation, remote monitoring of suspected and confirmed cases. It is important to highlight that some changes pay attention to different Brazilian realities, however, some municipalities have their particularities (PRADO et al., 2020; ASSIS et al., 2021; COSTA et al., 2021; LOTTA; RABBIT; BRAGE, 2021; VIEIRA-MEYER et al., 2021). The lack of training and Personal Protective Equipment (PPE) were also reported as difficulties for health professionals.

Regarding health surveillance in the territories, the articles presented five successful strategies. The first is a model of an epidemiological surveillance instrument that aims to improve the work process related to the notification, epidemiological investigation and monitoring of suspected and confirmed cases of COVID-19, with a flowchart of stabilization and referral to the Urgency and Emergency Network, contributing to with RAS (JESUS et al., 2020). Two other successful strategies are related to the use of geoprocessing and spatial artificial intelligence (ROCHA et al., 2021) and another comprises the incorporation of communication technologies to face COVID-19.

Spatial artificial intelligence demonstrates significant effects with regard to the management of human and monetary resources, such as the use of computational models of geospatial analysis to monitor the progress of COVID-19 in municipalities compared to coverage by the ESF and the number of respirators available (LIEBEL et al., 2021). Another study describes the use of spatial artificial intelligence in the context of immunization against COVID-19 in order to organize the necessary resources to combat the disease (ROCHA et al., 2021). Regarding the use of communication technologies, remote surveillance stands out through a platform designed to capture standardized clinical data on COVID-19 cases from the community (LEAL et al., 2021).

With regard to care for users with COVID-19, two strategies are observed, remote surveillance and the role of ACS in supporting the search and tracking of respiratory symptoms, as well as in health education for the population. In remote surveillance, patients were contacted by phone and/or WhatsApp, with appointments scheduled in person when necessary. The ACS is a key professional in helping with vaccination campaign actions, educational activities on the prevention of COVID-19 infection and support in administrative and prevention activities carried out in the health unit (PRADO et al., 202; LEAL et al. , 2021).

CONCLUSION AND IMPLICATIONS FOR PRACTICE

From the analysis of the evidence recovered through the integrative literature review, it was found that the strategies used nationally by Primary Health Care to control the infection by COVID-19 were presented in three axes: continuity of PHC own actions, health surveillance in the territories and attention to users with COVID-19.

The successful strategies included: an evaluative-normative instrument model for monitoring suspected and confirmed cases of the Sars-CoV-2 virus; patient monitoring platform

with remote surveillance; performance of Community Health Agents; use of information technologies; use of geoprocessing and spatial artificial intelligence.

The challenges are broad and complex, such as: difficulty in articulating the actions of the Health Care Network, surveillance and Primary Health Care; absence of federative coordination; difficulty in performing dental procedures, medical consultations and prenatal care; changes in the activities carried out by health professionals (insecurity; lack of PPE, training, masks and tests for COVID-19); difficulty of the population in adhering to social isolation; and poor use of geographic resources to support the location of vulnerable groups and priority for immunization.

Therefore, identifying the control strategies used nationally, sharing the actions that were successful and, mainly, the challenges, help in the management of Primary Health Care and in the qualification of health professionals so that, together, they manage the consequences, the damages to medium and long term caused by the pandemic and to respond immediately to future epidemics.

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